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ABSTRACT

This management study of public vocational education in New York City evaluates the delivery of effective programs to students. The first section outlines the goals and methodology of the study and the structure of the vocational education system. The second section discusses administrative difficulties which cause students to have problems with placement, program procedures, and preparation for employment. Section three analyzes the central administration of the vocational education system, and focuses on the lack of administrative coordination between the Center for Career and Occupational Education and High School Division and other units at the Central Board. Duplication of fiscal functions, budgeting, curriculum development and review, and teacher recruitment and retention are also discussed in this section. The fourth section analyzes intergovernmental issues involving Comprehensive Employment and Training Act programs, Youth Employment Training Programs, and the State Department of Education. In section five program and programmatic issues such as supplementary instructional programs, work experience programs, model programs, equipment improvement, and student follow up procedures are studied. Section six discusses relationships with community colleges and potential employers. A summary, tables, and appendices conclude the report. (APM)

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THE EDUCATIONAL PRIORITIES PANEL

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HELP WANTED

A MANAGEMENT STUDY OF PUBLIC VOCATIONAL EDUCATION IN NEW YORK CITY

July 1980

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SUMMARY AND RECOMMENDATIONS: A PLAN FOR ACTION

I. INTRODUCTION AND OVERVIEW

Vocational education takes on increasing importance as youth unemployment continues to rise at an alarming rate. One of the most serious barriers to employment is a lack of education and/or marketable skills, and yet the Central Board of Education is doing little to address the issue directly. This is not to say there are not some outstanding programs and some successful schools. Nevertheless, the vocational schools are overcrowded and large numbers of students are unable to find space in schools which offer vocational training. The number of vocational opportunities has not kept pace with the demand.

In many of the studies of vocational education in New York City and other urban areas, there has been a great deal of discussion of the need to provide students with job-related skills. There is a clear relationship between the high rate of youth unemployment and various social and economic ills and costs. The complete economic recovery of the city certainly depends on our ability to provide a trained work force and a safe, financially viable environment for business.

In this study, the Educational Priorities Panel is concerned with the efficient delivery of effective programs to students who themselves have indicated a preference for vocational programs at the high school level, who attend more regularly when enrolled in such programs, and who have expressed a desire for part-time work while going to school. The high attendance rates for these schools and for vocational programs within comprehensive schools certainly support the conclusion that those students

who feel their education has an understandable goal or more of a "real world" experience, are more likely to attend classes. For the 1978-79 school year, the City's average daily attendance for academic high schools was 77.59%, while for the vocational schools, it was 82.33%.

Several factors create the current inadequacy of the vocational education system which neither the city nor the students can afford. Insufficient private sector involvement in the vocational training programs, restrictions from both school employee unions and other unions, lack of funds, and the Board of Education's internal structure, combine to thwart any major change in the system unless they are vigorously addressed.

Until these issues are dealt with, the system continues to shortchange many students currently enrolled. There are important initial steps that must be taken as a precursor of more comprehensive changes in the system. This paper outlines these crucial first steps towards achieving long range goals.

The Educational Priorities Panel has conducted this study of the vocational education system in New York City as a management study that remains within the basic constraints of the current system. The specific recommendations for improving the delivery should be acted upon immediately. Other issues that must be addressed in a long range analysis of the delivery of vocational education are pointed out as they touch upon the current management system.

Structure of the Vocational Education System

Funding for vocational education programs comes from three major sources: 1) tax levy money; 2) the Vocational Education Act (VEA), a

federal program administered by the State Education Department; and 3) the Comprehensive Employment and Training Act (CETA), U.S. Department of Labor funds administered by the New York City Department of Employment (DOE). Title IV of CETA is the Youth Employment and Training Program (YETP) which mandates that the Board of Education must receive 22% of all the funds allocated the entire city for this program. In addition, state aid monies are received by the City for vocational programs under Chapter 399 of the Education Law, but these funds are a part of general state aid to education and are not categorically earmarked for vocational education.

There is a very complex system at the Board of Education for administering vocational education:

1) The Center for Career and Occupational Education (CCOE) is responsible for receiving the federal funding and providing assistance in occupational programming to the districts and high schools. However, CCOE evaluates only reimbursable programs (not tax levy-funded courses) and has only advisory capacity on curriculum and staffing.

2) The Division of High Schools evaluates the educational value of the programs, the curriculum and the distribution of course offerings through the superintendents and principals.

3) The Bureau of Educational and Vocational Guidance (BEVG) contains a career guidance unit which provides career information to counselors in the schools.

4) The Advisory Council for Occupational Education contains commisssions, some active and some inactive, in several business areas to channel industry input into vocational education.

5) The Division of Special Education administers vocational programs for special education students.

6) Three Budget Review Units are involved with the budgetary process of reimbursable funds. The Office of CETA Administration is a liaison between the Department of Employment and the Board of Education. The Office of Funded Programs (OFP) funnels reimbursable funding through the Board for CCOE. The Office of Budget Operations and Review reviews and enters budget proposals into the accounting system.

This cumbersome structure is responsible for waste and mismanagement and lack of planning and coordination that impair the quality of services as they are delivered to students.

This report proposes a variety of changes that could be initiated quickly and at no cost to the Board of Education to improve the delivery of vocational education to the students in the public high schools. It also underscores those basic changes in the system that will have to be made to achieve long term inprovement.

II. THE EFFECT OF THE DELIVERY OF SERVICES ON THE STUDENTS

Administrative difficulties revealed in this report cause students to have problems with the vocational educational system at every stage of their experience with it -- placement, the programs themselves, and preparation for employment.

Placement

Ten to fifteen thousand students each year fail to find a place in the vocational program of their first or second choice. While some programs are grossly overcrowded, others have difficulty attracting

students. Because fiscal constraints have drastically reduced the number of guidance counselors, students receive inadequate guidance to choose among 72 possible programs. Students who are rejected from vocational programs have few alternatives and are often not informed about the alternatives that do exist. Furthermore, there is no central capacity to match empty seats with students seeking admission. Apparently, course offerings and the distribution of them do not reflect demand. This is largely due to a lack of city-wide or borough-wide planning of programming, and the resulting sporadic placement of funding. Many students apply to vocational schools because they don't want to go to their zoned high schools. Long term plans to alleviate this situation must address the deficiencies of the comprehensive schools.

In School

This report will treat in detail several factors that influence the quality of vocational educational services: recruitment and retention of teachers, the availability of career guidance services, curriculum development and program review, the types of equipment, the availability and condition of equipment and supplies, supplementary or alternative programs and follow-up efforts. All have ramifications for students whether they are caused by poor management at the Central Board, lack of involvement of the private sector or restrictions on funding for equipment. The most successful schools are often those with the closest relationship to the private industry for which it is providing training. The quality of programs is affected when teachers cannot be attracted from private industry, hiring procedures are time-consuming, or teacher training does not keep pace with changing technology.

Curricula vary from school to school. Although there should be

variations in curriculum because of differing student populations, a core of knowledge and skills should be common to all programs. Students have no assurances that a program in a school is intensive enough, is geared to labor market needs or to their own varying skill levels, or has up-to-date or working equipment.

Work Experience and Job Placement

Private sector involvement is very important at every stage of vocational education — curriculum development, program implementation and review, equipment consultation, work study programs, and job placement.

Because job placement and development are handled on a program-by-program or school-by-school basis, both students seeking jobs and employers seeking workers must find their way through a maze of counselors and placement programs.

The overall picture of vocational training programs is very uneven. The numerous strong programs and acclaimed schools are the result of the efforts of individual principals, school-based personnel, and industry involvement.

III. CENTRAL ADMINISTRATION

All types of high schools offer occupational or vocational programs, but there is no existing structure to guide or coordinate course offerings or support services in the system as a whole, including programs in the districts.

1. CCOE and the High School Division

The widely acknowledged lack of coordination between CCOE and the High School Division has several results: lack of a mechanism to coordinate city-wide or borough-wide services; neither unit taking responsibility for tax levy-funded programs; principals and superintendents having divided

loyalties; the sporadic placement of funding and programs; programs whose goals and curriculum are determined by their funding rather than any assessment of needs; and the High School Division having inadequate input or knowledge of the vocational programs in their high schools.

- The current increased dialogue bewtween the High School Division and CCOE is endorsed, with the recommendation that a formal mechanism for interaction be developed as a result of this experience.

- There should be more emphasis in the High School Division on occupational programs so that these programs can be placed throughout the system in a coordinated manner.

- The High School Division has indicated a stronger interest in occupational program development, which we encourage. In developing a new position within the Division, however, there should be no duplication of CCOE's activities.

- The borough mini-plans developed by CCOE should be distributed to all the high school principals and used in their meetings with the superintendents. In addition, the charts of the course offerings contained in the mini-plans should be available to the feeder school to provide more exact information for the guidance counselors, students and parents in determining the actual offerings in the schools.

These mini-plans can provide a good starting point for improved planning, and can be valuable resources for the principals, who have neither the time nor the opportunity to collect employment data or become totally aware of the variety of offerings in nearby schools. Principals should continue to play the major role in running their high schools with assistance and direction provided by the Central Board.

- Coordinating and planning occupational programs should originate with the Division of High Schools and COCE, involving the superintendents directly, who have a greater sense than the Central Board of the needs of the schools, and can help negotiate the goals and objectives of the entire borough to assist in getting changes made in the high schools.

- Patterns of funding and program placement should be analyzed to determine the degree to which student needs are being met.

II. CCOE and Other Units

A. BEVG

Unlike the confused relationship between CCOE and the Division of High Schools, the major problem between CCOE and the Bureau of Education and Vocational Guidance is not a lack of coordination. Rather, it is one of duplication of efforts between BEVG and the Career Education Unit which is the guidance planning unit for CCOE.

- Career guidance programs should be assessed to determine if target populations, program goals, and methodology are different enough to merit the current number of programs and variety of administration of these programs.

- CCOE should contribute to BEVG two reimbursable funded people who have more specific vocational guidance experience to give BEVG a broader base.

B. Special Education

This study does not address the issue of providing vocational education to special education students. In the course of the study, however, it was found that there is a severe problem in that the vocational schools run at full capacity, making it difficult for Special Education students to get access to the shops.

- A mechanism should be established to apprise the Division of Special Education of all Industrial Arts shops and equipment that are under-utilized in the schools and which could be available for their programs. The borough surveys (mini-plans) contain these listings and the information should be shared with the Division of Special Education to encourage the use of these shops for Special Education students.

III. Fiscal Functions

The duplicative divisions that exist for the fiscal management of reimbursable funds in the area of occupational and vocational education cause management inefficiencies through adding time, paperwork, personnel, and sign-off responsibilities to a host of offices within the Board.

The CETA Administration Office duplicates many of the administrative and fund-raising functions of CCOE's successful activities. In addition, the Office of Funded Programs provides an added layer of responsibility that could be eliminated.

- As CCOE is a responsibility unit for reimbursable funds, it should have budgeting responsibility for the programs, with the final fiscal development and sign-off done by the Office of Budget Operations and Review. Pass-through of budget items to the Office of CETA Administration should be eliminated. The corresponding funds alloted to this unit for CCOE-related functions should be transferred to CCOE, which will offset a corresponding reduction of tax levy dollars for administration.

- The functions performed by the Office of Funded Programs should be performed by an administrative assistant within the budget unit of CCOE. The corresponding funds alloted to OFP for these functions should be transferred to CCOE with the additional dollars assigned to assist the schools in grant writing. These will also offset a reduction in tax levy dollars.

IV. Budgeting

The total amount of tax levy funds expended on vocational and occuaptional areas is difficult to trace, as many different criteria are used for different funding, and any tracing that is done is to justify the use of Chapter 399 funds. Decisions by principals to fund with tax levy dollars programs previously funded by VEA are made without reference to what is available in the area. In addition, many principals and administrators feel that the needs and priorities for grant proposals are not coming from the schools themselves, but rather are established by CCOE. The criteria for the distribution of funds to the schools by CCOE are unclear or contradictory. There is no clear policy on whether funds should be concentrated to provide excellent programs for fewer students or spread out to provide less intensive programming to larger numbers of students. Therefore, because of a diffusion of funding, many educational

options courses are watered down to the point where they do not provide adequate career preparation. Individuals in the schools felt that the schools which would receive the funding was often pre-determined by CCOE before they considered the schools' proposals.

- An analysis of the current expenditure of tax levy funds for vocational and occupational education by borough in conjunction with student demands and needs and the distribution of reimbursable programs should be used in determining future priorities for funding programs.

- The criteria for determining which schools will receive the funding should be made clear to all the high schools and be established in conjunction with the Division of High Schools. A central policy for improving the programs already in the schools to ensure that they are fulfilling the needs of the students should be a primary criterion.

- Funding priority should be given to existing programs with the potential for success to provide their students with enough concentration of course to enable them to acquire useful skills in the field. Particular attention is needed in the educational options courses.

V. Teacher Recruitment and Retention

Difficulties with teacher recruitment and retention are caused by non-competitive salaries, cumbersome hiring procedures and lack of timely licensing examinations. Many of these issues cannot be addressed within the current system of vocational education staffing patterns. The Board committee to deal with recruitment problems should analyze projected staff needs, consider giving credit for work experience and, in a long range plan for providing for teacher recruitment and retention, explore a variety of experimental methods: contracting out with the private sector for on-site training; recruiting part-time teachers who can continue to work in private industry; and establishing a means whereby skilled persons could provide occupational training without completing all the formal licensing requirements.

In addition:

- Personnel approval procedures must be improved to expedite hiring teachers for reimbursable programs.

VI. Curriculum Development and Program Review

Curriculum at the Central Board for vocational programs is developed in two ways -- through CCOE's Curriculum Unit and through the standing committees of the occupational units. However, schools themselves receive little assistance in curriculum development. Therefore, curricula are developed by individual schools and are not consistent from school to school. EPP supports the autonomy of the principal in making decisions affecting his/her school. At the same time, principals in our survey indicated a desire to get more guidance from CCOE in setting up curriculum outlines.

- The curriculum unit within CCOE should be disbanded, as it is not supplying the high schools with sufficient assistance.
- The responsiblity of developing curriculum for use in the schools should lie solely with the occupational areas which could take over any responsibilities of the curriculum unit in more compartmentalized areas. Curriculum for the trade and technical areas in particular should be developed to meet the entire range of skills in a trade. These units should receive the reimbursable funds for the two professionals and one secretary now alloted to the curriculum unit. The inclusion of these funds will offset a corresponding decrease in tax levy-funded positions.
- This responsibility must be acommpanied by a strong involvement of private sector employers in particular fields, through their participation on the standing committees and by experts in the fields providing the schools with training guidelines.
- To provide minimum standards and background information, assistance should be given in curriculum development for vocational and educational options programs with minimum structure, but in modules that can be utilized with the necessary adjustments to fit a school's population.

IV. INTERGOVERNMENTAL ISSUES

The major problem with the Board's use of Chapter 399 money is that the State does not earmark these funds and they are not guaranteed to the Board of Education.

- The Chapter 399 funds should be earmarked for vocational education.

Many problems have developed in the Board's relationship with the Department of Employment which administers CETA funds. Some are being resolved.

Board of Education procedures for leasing space for CETA programs are lengthy and leases often are not cost-effective.

The Board does not apply for more YETP (Youth Employment Training Program) funds than it is guaranteed to receive by law.

The Board of Education and the Department of Employment often lack familiarity with one another's programs and procedures. At present, better coordination is planned for administration, but not for improving direct services to students.

- The Department of Employment should investigate rental or purchase of training facilities and conduct cost analyses of renting space compared with purchasing the facility.
- The Board and DOE should encourage not only multiple use of space but also split duties of administrative staff because many VEA programs and CETA programs are closely related. This might maximize the impact of programs, and result in administrative savings, freeing additional money for direct service.
- The Board should compete for additional YETP funds by developing proposals for direct service, above the 22% mandated amount set aside. The emphasis should be on the large population it serves, not the perceived limits as to what the Board can receive.

V. PROGRAMS AND PROGRAMMATIC ISSUES

Alternative vocational programs are valuable to meet the needs of students not accepted into regular vocational programs because the programs often keep the students interested in school.

The Shared Instruction Program can expand vocational training opportunities for students, but creates certain problems in receiving schools because of lack of central support. These include oversized classes, lack of student concern for the equipment, and lack of receiver school control over the students.

The After School Program is also valuable in providing disadvantaged students and others with some employment skills. Transportation problems limit both programs.

- An analysis should be made of the use of YETP money to supplement Shared Instruction and After School Occupational Skills Programs. Additional funds should be requested from DOE to provide funding for eligible students in the program. A savings of $83,870 in tax levy dollars could be realized.

- Information regarding supplemental programs should be given to intermediate and junior high schools students at the time they are denied admission for specific vocational programs. Follow-up should be conducted by the schools they will attend to ensure that these students receive some assistance in getting enrolled in these alternative programs.

- For the Shared Instruction Program, sender schools must be held responsible for the control over their students. Students who participate in the Shared Instruction Program need to receive at least one workshop at the sending school to alert them to the responsibilities of participating in the program and stressing some follow-up by the sending school in cooperation with the receiving school when problems arise.

- Additional maintenance costs caused by a heavier use of equipment at the receiving school should be paid for by the Central Shared Instructional program.

- Transportation difficulties experienced by participants could be minimized by an overall planning effort to place Shared Instruction and After School Occupational Skills Programs throughout the boroughs.

- Efforts should be made to pair academic and vocational schools to decrease the administrative difficulties, combining the resources of two schools and interests of the administrators.

Work experience programs are an important part of vocational training both for students and for the link they create with the private sector. The two largest work-study programs are the Cooperative Education Program and the Youth Employment Training Program.

Placement personnel in these programs often do not coordinate with one another, thus depriving students of a full range of work experiences.

- Coordination between the various work experiences should be improved and career ladders in this experience should be investigated.

- Placement services in the high schools should be streamlined, with all placement requests going through one individual and with more sharing of CO-OP and YETP placement services by one individual.

Obsolete or broken equipment is a major shortcoming in vocational training programs. The process for purchasing equipment is extremely inefficient and costly. Equipment maintenance is a serious problem because of lack of adequate funding, but more flexible and effective use of funds can alleviate the problem. Better coordination, planning and purchasing also could alleviate some equipment problems.

- Priorities should be established for those fields where use of modern equipment is essential for the student to obtain entry level skills.

- Work study programs and trips to businesses should be expanded so that students are exposed to the most up-to-date equipment possible.

- For those repairs which do not require licensed tradesmen, utilization of student work study programs should be further expanded.

- The principals should be given more freedom with the OTPS monies, increasing the discretionary amount so it can be used more flexibly for repairs or purchase of supplies.

- The vocational high schools could be used as a pilot program for giving a principal complete discretion over all his or her OTPS monies.

- To ensure the most careful and cost-effective purchasing of equipment, members of the private and public sector who are users of that type of equipment must be involved in the analysis of the existing facility, planning for the uses of the equipment, and recommending the best alternatives.

- Members of the private sector should be encouraged to donate maintenance services as well as supplies.

Other recommendations rely on a stronger recognition by the City of the importance of funding the Board's capital improvements, repairs, and maintenance needs.

Follow-up of students who complete training is lacking. Such data can be used to shape future programming.

VI. BEYOND THE HIGH SCHOOLS

Vocational training programs should relate to the world of business and to post-secondary institutions.

There are a number of programs that have established relationships with nearby community colleges to utilize their more advanced equipment or courses in vocational areas.

Many opportunities for utilizing the wealth of expertise and technology available in the City are lost to the school system. There are two benefits to involving the private sector in vocational programs. The first is as advocates, to ensure that the ongoing source of workers from the schools receive the best possible education. The second role is as experts in the field, to assess programs and equipment, and facilitate the placement of students. A priority to involve the private sector in education

issues must be established at the highest levels at the Board of Education.

In those schools where private sector participation has been strong, programs have been developed to provide trained workers in response to the immediate needs of the business and industrial community. The most consistent involvement of the private sector with the schools is in job placement. Often, however, efforts to contact the schools to fill positions are thwarted by the maze of the school system itself.

- The High School Division should assign the responsibility for receiving centralized placement requests, particularly for large programs, to one individual. In addition, individual placement contacts should be established at each high school, with a number and name listed in the high school directory, and circulated to the major industry and business organizations, employment agencies and media outlets.

- Industry representatives should be utilized in curriculum design and staff development, particularly those individuals who have been involved in work experience programs or who have a vested interest in hiring high schools graduates.

Although the Advisory Council exists to involve business and industry in the development and review of occupational programs, there is no mechanism to ensure that their recommendations or the recommendations of their small commissions are given adequate consideration.

- Superintendents should be represented on the Advisory Council.

Local information can be more important than reliance on general labor statistics. Data from the U.S. Department of Labor is not necessarily applicable to changing course offerings. There are other sources of statistics such as profiles of industries and communities that should be utilized by the Board.

A stronger role for the private sector involves both equipment and work experience. To offer real alternatives in the area of equipment purchasing and maintenance and in providing adequate job experiences for a

large number of high school students, a broad, long-range plan of action is needed. As stated in the report, obsolete or broken equipment is a major shortcoming in vocational programs, and many private employers say that the schools' dated equipment makes the programs less valuable. New York City cannot afford to keep its equipment up-to-date, but private companies must maintain their equipment, and must remain up-to-date. If students could get the basic skills at the schools and then practice on the machines being used in industry, on site, the educational system could become a support system in vocational training providing the basic skills to give the students access to the equipment, and then supplementing the school-based program with those areas needing improvement.

Work experience could be vastly expanded by private sector coordination with the educational system. This can serve the students' expressed desire for employment, the need to break up the monotony of the school term, increase their desire to learn, and expose the students to the world of work. With businesses being more intimately involved with students, they would have more of a sense of what the system should give the students to meet the needs of the business world. Both sectors would therefore benefit from the involvement and, more importantly, so would the students.

CHAPTER I

INTRODUCTION AND OVERVIEW

If the goal of an educational system is to prepare youngsters to lead satisfying and productive lives, then no area of that system has more immediate application than the vocational education program. Youth unemployment continues to rise at an alarming rate. One of the most serious barriers to employment is a lack of education and/or marketable skills, and yet the central Board of Education is doing little to address the issue directly. This is not to say there are not some outstanding programs and some successful schools. Nevertheless, the fact remains that the vocational schools are overcrowded (see Table 1) and large numbers of students are unable to find space in schools which offer vocational training, while, on the whole, the school population is declining. New York's unusually high dropout rate accounts for part of the overall enrollment decline, with many students opting for no formal training rather than attempting to cope with the maze of the existing educational system or the inadequacies of that system in addressing their needs. The number of vocational opportunities has not kept pace with the demand.

In many of the studies of vocational education in New York City and other urban areas, there has been a great deal of discussion of the need to provide students with job-related skills. A summary paper for the New York City Department of Employment stated that:

> "Analysis of the characteristics of the applicants, served by the New York State Employment Service reveals that more than 103,000 applicants were less than 22 years old, a little over 18% of the total applicant population. As of the final quarter of 1978, over 25.3% of New York City non-student youth between the ages of 16 and 19 were unemployed, with the unemployment rate of minority groups in this age group estimated at almost 33%. The Crime Analysis Division of the New York City Police Department states that, out of the 230,076 arrested last year, 84,187, or almost 40%, are under the age of 21. It is also estimated that among the 485,000 16 to 19 year olds in the city, approximately 97,000, or 20%, can be categorized as economically disadvantaged."[1]

These statistics touch on the vicious relationship between the high rate of youth unemployment and all of its social and economic ramifications. Unemployed people require more economic and social services: unemployment insurance, increased public assistance, and food stamps. Crime, alcoholism, drug abuse and child abuse are only a few of the problems that seem to increase with the unemployment rate. Everyone suffers from the effects of unemployment. Residents are often victims of the crimes committed by unemployed youths. Furthermore, they must bear the tax burden imposed by increasing service demands, whether they be for social welfare or police protection. Both residents and businesses suffer from deteriorating neighborhoods. Efforts to increase employment by encouraging economic development are foiled because businesses' demands for security and a competent labor pool are not being met. The complete economic recovery of the city certainly depends on our ability to provide a trained work force and a safe, financially viable environment.

In this study the Educational Priorities Panel is concerned with the efficient delivery of effective programs to students who themselves have indicated a preference for vocational programs at the high school level, who attend more regularly when enrolled in such programs, and who have expressed a desire for part-time work while going to school. Although, as the report will discuss, there may be many reasons for an individual's application to a vocational school, the high attendance rates for these schools and for vocational programs within comprehensive schools certainly support the conclusion that those students who feel their education has an understandable goal or more of a "real world" experience, are more likely to attend classes.

The Carnegie Council on Higher Education points out:

> A general environment that would enable youth to make an effective transition into adulthood is deficient in many respects, including little early contact with the world of work and little opportunity ever for organized service to others. It is "knowledge rich" but "action poor," ...Specifically, the transition into permanent jobs in the labor market is difficult for many youths...A sense of dependency is carried on too long; and, with it, a sense of rebellion against authority."[2]

For the 1978-79 school year, the City's average daily attendance for academic high schools was 77.59%, while for the vocational schools, it was 82.33%.[3]

Neither the city nor the students can afford the current situation where the educational system is not acting in concert with the business world. Insufficient private sector involvement in the vocational training programs, restrictions from both school employee unions and other unions, lack of funds, and the Board of Education's internal structure combine to thwart any major change in the system unless they are vigorously addressed.

Until these issues are dealt with, however, the system continues to shortchange many students currently enrolled. There are important initial steps that must be taken as a precursor of more comprehensive changes in the system. This paper outlines these crucial first steps toward achieving any long range goals.

The Educational Priorities Panel has conducted this study of the vocational education system in New York City as a management study that remains within the basic constraints of the current system. The specific recommendations for improving the delivery should be acted upon immediately. Other issues that must be addressed in a long range analysis of the delivery of vocational education are pointed out as they touch upon the current management system.

Goals of the Study

The Educational Priorities Panel (EPP) has frequently studied various centrally-administered programs at the New York City Board of Education, examining how management and budget impact upon the delivery of programs to the students. This particular study focuses on the vocational education programs conducted in and associated with the high schools. Although many studies on vocational education in New York City have been done in the past[4], none is a comprehensive management study nor have major changes resulted from their recommendations.

This study examines the following components of the issue:

- patterns of management and decision-making at the Central Board which affect the vocational education programs;
- public and private sources of revenue and their uses as possible supplements to the current vocational education budget;
- the delivery of programs within the high schools; and
- the involvement of the private sector;

By examining budget, management and programmatic issues, this report will combine past recommendations, update the level of understanding of vocational education in the City, and enable the Board of Education to implement a realistic plan of action for a more effective and efficient delivery of vocational education programs.

For the purpose of this study, vocational education will be defined as those occupational and vocational courses designed to teach students a range of skills and familiarity with equipment that can be applied to a particular profession, including the teaching of non-technical skills. In most instances, the programs are those which meet the State Education Department guidelines of meeting 10 periods a week for a 2-year sequence.

The report is organized into the following areas: student-related issues; central administration at the Board of Education, including a description of the administrative difficulties that have surfaced; intergovernmental issues, involving funding sources, and the relationship between the Board of Education and these sources; programs; private sector involvement, including community colleges; and conclusion. After a brief description of the methodology employed for this study, we will begin with an overview of the structure of the vocational education system in New York City's public schools.

Methodology for the Study

To examine the various aspects of the vocational education program, current literature was reviewed and interviews were conducted with a total of 120 individuals, including 32 administrators at the Central Board of Education, 55 high school principals, assistant principals, and teachers, and 11 persons involved with the funding of reimbursable programs at the City, State and Federal level. The list of individuals and guides are attached as Appendix A. Allocation patterns and funding levels of programs were analyzed, and program design and implementation were examined.

In examining the delivery of vocational education services, EPP has investigated two programs in depth - data processing and machines trades. Specifically, we have concentrated on private sector involvement and student perceptions of the programs. In these fields, teachers and assistant principals were interviewed, a small sample of students were surveyed (Appendix B)[5], and members of the appropriate business and industrial communities were contacted to assess the goals of the program, its development, the expectations of the students and the employers,

and the involvement of the private sector with the school system. In both of these areas, job opportunities at entry level positions for high school graduates exist, although the programs themselves are quite different. A 1978 study on the Machine Trades for the Rockefeller Brothers Fund indicates that:

> "The machine trades industries in New York City appear to have stabilized after a period of decline from approximately 1960-1975. Despite the flight of most large employers, about 300 small and medium-sized firms remain in the City...At present, a shortage of skilled labor exists in New York and throughout the nation. The demand for semi-skilled and unskilled labor is substantially less, but the demand may be constrained by the lack of skilled personnel who set up machines to be run by less skilled laborers."[6]

Although technological advances have been made in the machine trades industry with computerized tape machines, it should be noted that the small firms would probably not invest in the more expensive machinery ($35,000 - $250,000 per machine vs. $7,000 for a conventional milling machine), and therefore the impact on the need for skilled labor in New York City may be reduced while the need for semi-skilled and unskilled labor remains constant. According to the New York City Regional Comprehensive Occupational Plan, 1979-80, the high schools graduated 53 people trained in the Machine/Metal Trades. An additional 96 people completed the Board's Adult Preparatory Program. Machine shop programs were examined at Manhattan Vocational, William Grady, Thomas Edison, Ralph McKee, Alexander Hamilton, East New York, and Queens Vocational High Schools for this study.

The data processing area can be linked to many of the large businesses in New York City, with clerical workers constituting the largest and the second fastest growing occupational group in tne New York-Northeastern New Jersey Region. It is projected that clerical employment in this area

will increase 10% between 1974 and 1985, or almost one of every four jobs in the area. The demand for computer operators is projected to increase from 27,668 to 31,646 during this period, with computer and peripheral machine operators expected to have openings resulting from both growth and separations.[7] A general classification of computer-related jobs includes: data-clerks, key-entry operators, production controllers, computer operators, and programmers. Only the last two areas are likely to require advanced education or job experience. The New York City Regional Comprehensive Occupational Education Annual Plan, 1979-80, indicates that 297 secondary students completed courses in Data Processing and 60 adults completed the Board of Education's course. Data Processing programs were looked at in the following schools which contain IBM System 3 computers: Murray Bergtraum, Norman Thomas, Boys and Girls, August Martin, Susan Wagner, and Harry Truman High Schools.

Structure of Vocational Education System

In order to fully understand the delivery of vocational education in New York City, it is necessary to be familiar with the funding sources and the agencies and the processes involved.

A. Funding Sources

The funding for vocational education courses in the high schools comes from three major sources: 1) tax levy money; 2) Vocational Education Act (VEA) funding, a federal program administered by the State Education Department; and 3) the Comprehensive Employment and Training Act (CETA), U.S. Department of Labor funds, administered by the New York City Department of Employment (DOE).

In addition, State Aid monies are received by the City for vocational and occupational programs under Chapter 399 of the State Education Law, but these funds are a part of general State Aid to Education. VEA and CETA funds are reimbursable monies. (Reimbursable funds are monies that are provided by the Federal and State governments for a range of direct instructional and supportive programs that are operated under specific guidelines.)

The Center for Career and Occupational Education (CCOE), the central office for receiving reimbursable monies for vocational programs, received $32,772,000 in funding for FY 80 (see Table 2). VEA funds accounted for $17,410,000 of this. Most of the remainder are CETA funds. Generally, one-third of the annual VEA money is spent on equipment, with the remaining amount allocated to proposals submitted by high schools individually and in umbrella proposals. In addition, $2.5 million was allotted specifically for equipment. Of the VEA money received, 7.1% of all money not used for equipment is given to the Board of Education for indirect costs, 2.4% of which goes to CCOE.

The VEA money is appropriated to Region 2, which consists solely of New York City. George Quarles, the Chief Administrator of the Center for Career and Occupational Education, is also the Head of Planning for Region 2, setting priorities and determining what programs are approved for submission to the State as part of New York City's Comprehensive Annual Program Plan for Occupational Education. CCOE submits an annual Program Plan which must be approved by the State Education Department. Table 3 lists the programs funded by VEA monies for 1978-79.

For Vocational Education Act funds, the Board deals directly with the State Education Department (SED). A separate division of the SED that

also relates with the Board through the Curriculum Unit of CCOE is the Instructional Support System for Occupational Education (ISSOE), to develop modular curricula throughout the State.

Federal monies come to the Board under a variety of programs in addition to VEA, mostly under Title II and Title IV of the Comprehensive Employment and Training Act (CETA). Currently, 22% of the Title IV Youth Employment and Training Program (YETP) for the whole City must be allocated to the local education agency, and in FY 1980, this amounted to $5,250,000 designated to establish career employment experience programs for targeted youth. Each project has a job placement unit, and 30% of the participants must have positive termination in unsubsidized employment. The Board submits a proposal to the Department of Employment (DOE) which acts as the prime sponsor for New York City, and DOE reviews the plans in terms of the profiles and what kind of training they feel is needed. Although the mandate is to give the local education agency 22%, this is a minimum and, in some cities, a much larger percentage is actually received by the local education agency. Schools which are involved in the YETP programs were selected by the Division of High Schools primarily on the basis of being Title I schools, poor attendance, and high dropout rates.

Federal monies are also received under Title IIB Classroom Training Programs, which are primarily adult programs, at $4 million a year, which includes $1 million for enrollee benefits paid directly by the Department of Employment to the participants.

Tax levy dollars consist to a large degree of State Aid funds under Chapter 399. The Chapter 399 funds were developed in 1976 on the basis of student registers and occupational education programs in the areas of

trade and industry, technical health careers, and agricultural careers. These are supplemental funds for the "Big Five" cities in New York State who do not receive BOCES[8] money. The major difference, however, is that the Chapter 399 funds become a part of the State aid monies, and are not categorically earmarked for vocational education. It is difficult to estimate the exact amount of money that is spent on occupational programs in New York City partially because of the nature of the tracking done for 399 funds by the Board. Because the Board knows how much money is received in 399 funds before it must be justified, efforts to track expenditures for vocational programs stop when the level of 399 funding is reached. Chapter 399 funds do not include any business courses, for example, and although all the schools are requested to submit claim forms to the Central Board, the Board only uses those that are necessary to meet the Chapter 399 amount. For FY 1978-79, 399 funds amounted to $5.7 million. For the reasons explained above, this figure does not, in fact, reflect an accurate accounting of city tax levy dollars for occupational or vocational education, but rather only a portion of the total.

The two major outside agencies that the Board is required to deal with, then, are the State Education Department and the New York City Department of Employment.

B. Internal Structure

Currently, the Board of Education's vocational programs are conducted in a pluralistic manner with a variety of delivery systems. This is a result of the reorganization of the schools in the late 1960's to combine the vocational and academic offerings through the concept of comprehensive high schools. While this concept was supported by most organizations and many groups within the school system (except the vocational teachers

and principals), the comprehensive schools program was never fully developed. Only 30 out of 79 academic-comprehensive schools offer the students occupational/vocational courses which meet 10 periods a week (see Table 4). Money for shops in many of the schools dissipated, and most participants conclude that the Central Board did not provide sufficient support to ensure that the overall comprehensive high school policy succeed. At the time, a number of small vocational schools were phased out and programs in these schools were not replicated in the newly constructed comprehensive schools. In addition, the Board also eliminated the separate division of vocational high schools from its Central Board administrative structure and the organization of the vocational programs has been confused ever since.

The present delivery of vocational education involves the following units at the Board of Education:

- The Center for Career and Occupational Education (CCOE)
- The Division of High Schools
- The Bureau of Educational and Vocational Guidance (BEVG)
- The Advisory Council for Occupational Education
- The Division of Special Education

Three offices are involved in the budget review:

- The Office of CETA Administration
- The Office of Funded Programs
- The Office of Budget Operations and Review

1. The Center for Career and Occupational Education (CCOE)

The Center for Career and Occupational Education, a division of the Central Board, provides technical assistance in the area of occupational and vocational programs to the districts and the high schools,

and is the central office for receiving reimbursable monies for vocational programs. The organization charts for CCOE are Appendix C and D.

In the present organizational structure, CCOE generally serves as an assistance unit to the high schools rather than to other Central Board divisions or to borough superintendents. While CCOE allocates reimbursable funds, they can only advise on curriculum and staffing, without the authority to mandate changes. CCOE evaluates only those programs in which it has invested reimbursable funds and is responsible to the State Education Department for this evaluation. This evaluation is to determine whether the teacher is appropriate, the general curriculum is within the guidelines of the annual plan, and the equipment is in place. Actual curriculum content and educational value are evaluated by the appropriate personnel in the Division of High Schools.

2. The Division of High Schools

The Division of High Schools provides central budgeting and administration for all the high schools, and, through the superintendents and the high school administrators, is involved in placing programs in schools, reviewing curriculum and course offerings, and evaluating the educational offerings in the schools. The High School Division is not involved with the advisory committees (see below) or the CCOE in monitoring the appropriateness of the equipment and the curriculum, although it is involved with evaluating the delivery of the curriculum.

3. The Bureau of Educational and Vocational Guidance

The Bureau of Educational and Vocational Guidance (BEVG) is a separate bureau under the Office of Pupil Personnel Service. Its career guidance component deals with the Center for Career and Occupational Education in a cooperative nature, primarily because the CCOE administers all Vocational

Education Act funds, which are the major source of funding for vocational and career guidance. BEVG also works closely with the Division of High Schools. Primarily, however, the Guidance Bureau directs its efforts toward the counselors who are out in the schools at all grade levels, and relates to the high schools and the districts through these individuals. They provide the counselors with labor market data, new studies, and information through the publication of a newsletter.

4. The Advisory Council for Occupational Education

The Advisory Council is a unit mandated by the State Education Department to advise the Board of Education through CCOE on the policies and administration of vocational education. There are various advisory commissions in different business areas which were created to get specific private industry input into the school's programs; to identify employment opportunities; to update information on entry level requirements; to advise the schools on needed curriculum and equipment; and to provide for the upgrading of teacher training. Some of these commissions are active and some are not.

5. Division of Special Education

The Division of Special Education has a number of vocational programs. There are currently 8,000 special education students in the high schools, with about 500 in vocational schools. Special Education gets 10% of VEA funds, which is a specific set-aside for adults and secondary students and the Division of Special Education consults with CCOE in the drafting of the annual plan for State VEA funds. In addition, the Chief Administrator of CCOE sets aside 10% of the slots in the Youth Employment and Training Program (YETP) for Special Education students. Special Education students are in 11 of the 23 vocational schools[9], and are either mainstreamed

(participate in regular classes) as in Westinghouse Vocational High School, or they are in special shops, as at The School of Printing. At the comprehensive high schools, the participation varies with the structure of the schools, and students tend to be mainstreamed more.

6. Budget Review Units

Three other offices at the Central Board are involved with vocational programs: the Office of CETA Administration, the Office of Funded Programs, and the Office of Budget Operations and Review. Their involvement is with the budgetary process of the reimbursable funds.

The CETA Administration Office was established in 1979 to try to get more CETA money for the Board and to improve the management of CETA-funded programs of the Board of Education. In addition, the Office is responsible for the Public Service Employment Program (PSE), an adult subsidized-employment program, because the Board determined that there could be a link between PSE and the youth programs. Therefore the administrative, budgeting and reimbursable matters for all CETA programs and the operation of the PSE program were combined. In addition, the office is responsible for all dealings with the Department of Employment (DOE).

All reimbursable programs for the Board of Education must be funnelled through the Office of Funded Programs. Therefore, this office is responsible for scheduling CCOE's grant applications to come before the regular meetings of the Board of Education for its approval. Furthermore, OFP must ensure that CCOE programs are not "in conflict" with other programs.

Finally, budget data from vocational programs are submitted to the Office of Budget Operations and Review for a non-programmatic review of budget proposals and claims and for entry into the Board's accounting system.

With this background, then, we can proceed to a discussion of the administrative difficulties caused by this complex structure.

CHAPTER II

THE EFFECT OF THE DELIVERY OF SERVICES ON THE STUDENTS

Although the Educational Priorities Panel's modus operandi is to focus its attention on the management and financing of the Board of Education and its programs, its ultimate concern is the effect of these programs on students. Many of the city's vocational programs enjoy national acclamation. However, to the extent that mismanagement and duplication mitigate the effectiveness of educational programs to further children's learning, we are concerned with how to improve those conditions. Waste of administrative funds means the loss of dollars that could be devoted to instruction. Lack of planning and coordination results in poor quality programs.

Subsequent chapters of this report will deal with the specific nature of the administrative difficulties of vocational education programs -- the problems within the Central Board, the relations between and among the Board of Education and other city agencies, programmatic weaknesses, and issues that reach beyond the high schools to the relations with post-secondary schools and with employers. However, in this chapter, we will illuminate first what the effects of these administrative difficulties are on the experiences actually encountered by students enrolled in or wishing to enroll in vocational programs. Problems are encountered at every stage of the students' progress -- getting placed in the programs; learning in the programs; and being prepared for employment.

Placement

Lack of planning to meet students demands for vocational education has resulted in 10,000 to 15,000 youngsters each year failing to find a place

in the program of either their first or second choice, accordingly to CCOE's own estimates. Considering that 50,066 students applied for vocational programs for the fall of 1979, this represents a substantial percentage. There were 35,482 students enrolled in vocational high schools in September 1979 in grades 9 through 12. The number of students rejected could potentially double or triple vocational enrollment if provisions could be made for all of them. Ironically, while some vocational programs are grossly overcrowded, others have difficulty attracting students. Students who are rejected have few alternatives and are often not informed about the alternatives that do exist, and facilities are often lacking for special education students. While we will discuss these problems in greater detail later, suffice it to say here that most of these difficulties are a result of flawed budgetary and administrative procedures.

One important reason for the difficulty in planning for and meeting the demand for vocational programs is that many students apply to vocational high schools, not because they want to learn a particular trade, but because they do not want to attend their zoned school. It is very hard to plan programs for these students since their application forms do not reflect their true preferences. Other students, who have a strong preference for the school of their first choice may be rejected in favor of a student who would have been just as content in another vocational high school. Nevertheless, for most students, the application does reflect a real desire for that program, and the application information should certainly be used as a basis for initiating similar types of programs at other schools, particularly within the boroughs. Borough-wide plans for occupational areas would be very helpful in this regard, but while these plans have recently been developed, they have not been utilized, nor do they reflect any assessment of student needs. Certainly,

there is a larger role for the borough superintendent in the implementation of such plans.

There is no solution to the problem of applications by students not genuinely interested in vocational training other than to address the deficiencies of the zoned high schools so that youngsters do not feel compelled to avoid them.

Another part of the difficulty in placement revolves around the multiplicity of choices available to the students and the admissions procedures. In the intermediate and junior high schools, students make applications to a variety of programs for their high school years, with students being able to apply to as many as 72 types of programs. Guidance services have been cut drastically in the last few years, and those remaining to help students make these choices are uncoordinated. There is one Community School District which has no counselors, and 85 junior high schools and intermediate schools with one counselor to serve all the students.[10] Students often make choices without full information about all the alternatives or full knowledge of the course offerings within available programs.

Students select schools by reading the high school directory, by consulting with their parents and guidance counselors, and by getting additional information about the schools from recruiting teams used by the high schools in the feeder schools. Often, they choose on the basis of friends' recommendations. Many of the vocational schools also reach out to students through open houses. The high application rate to these programs reflects both student interest and school recruitment efforts. Some intermediate schools sponsor "fairs" or career nights. As of this year, students for "unscreened" vocational courses (those without entrance requirements) are centrally placed by computer.

Approximately one half of the vocational programs require entrance examinations. Those which do not require examinations try to attract

the students who will make the best use of the training as determined by the individual schools. The factors most heavily weighed are a student's attendance record and basic math and reading skills.[11]

The admissions procedure itself is complex, primarily because of the large number of choices including the location of the program, the neighborhood in which it is located, the desire of each school to get the best students, and the desire of students to get the best programs. This year there is a uniform notification and decision date which will somewhat reduce the psychological effect of multiple rejections, a recommendation made by EPP in its study of the high school allocation formula. The procedure should be improved to ensure that there are as few empty seats as possible when programs are in demand, given the many complex factors that influence students' choices. Information on student applications could be utilized by schools with available space. The Central Board could suggest other schools that still have space. In addition, students who are denied admission from specific vocational programs should receive, with the admissions results, notification of Shared Instruction and After School Occupational Skills Programs (see pages 68-72) that could provide them with similar training. Follow-up should be conducted to ensure that these students receive some assistance in getting enrolled in these alternative programs.

Currently, those who run the alternative programs reach out to students, as opposed to the encouragement being given within the junior high, intermediate or high school actually being attended. Often, however, there is a basic problem of inertia once the student is enrolled in his/her school. The existing programs, such as Shared Instruction, have logistical problems in getting the students from one school to another which also keep them from being a viable alternative to many students. In addition, principals interviewed at schools with Shared Instruction

programs were not totally supportive of the program and its expansion would face some opposition, unless the difficulties with the program were resolved (see Chapter V).

In addition to a lack of coordination so empty spaces can be identified, this mismatch is also due to a misconception at the Board about the preferences of principals regarding admission of students to vocational courses. Our survey found many principals willing to take students with low basic skills, although this is not acknowledged at the Central Board. These principals stated that they had remediation courses at the school and that there are varying levels of skills a student can learn. In one case, according to the principal, a school lost 1000 of its applicants because they did not meet the Chancellor's criteria for promotion. The principal indicated that he would have accepted the students who were able to get waivers but never received a listing of those who might be waived into high school. Instead, he has empty seats. In another instance, the principal stated that, although many of his students may not pass the competency tests required for a diploma, they would have skills they can sell and that certainly is of tremendous value.

Another result of the lack of coordination is the underutilization of shop facilities, which could be used for special education students. This issue is more fully discussed on page 39.

More space for vocational students could be provided if duplication of administrative duties at the Central Board were eliminated; if funding resources were used to their maximum, and if government funds were effectively coordinated with tax levy dollars. Currently, the distribution of money from outside sources is sporadic, and the use of tax levy funds for occupational education is not equally distributed in all the boroughs (see pages 43-52).

Varying other resources, demands and needs in the boroughs are legitimate reasons for an unequal distribution of funds. But if the distribution is merely random, it is a situation that must be remedied. The use of funds should be closely examined to ensure that they do not reflect a dearth of program offerings in some occupational and vocational areas or in some geographical areas where they are needed for students.

In the Schools

This report will deal with several of the factors that influence the quality of the vocational education services being delivered to students in the high schools. Recruitment and retention of teachers, the availability of guidance services, curriculum development and program review, the types of equipment, the availability of and condition of equipment and supplies, supplementary or alternative programs, and follow-up efforts all have ramifications for the students whether they are caused by poor management at the Central Board, lack of involvement on the part of the private sector, or restrictions on funding for equipment. The report looks at the impact on the students by examining specifically their experiences in the fields of data processing and machine trades training.

A student questionnaire conducted for this study (see Appendix B) demonstrated that 59.4% of those in the machine shops want to get a job in the field, 68.5% are familiar with the opportunities in the field, and 74.8% know what skills they will need. 65% feel the course is teaching them skills they can sell. For this field, the plans for the future were split between jobs and additional schooling, and 39.2% stated that they had visited a machine shop at some time.

In the field of data processing, the results were similar in many ways with 69.3% wanting jobs in the field. However, 68.7% had not visited a

business to see what data processing was like, and 82.2% planned to go on to college. It appears then, that a majority of the students have a goal in mind and are, in fact, interested in the field of study. Of particular interest is the small percentage of both courses where a guidance counselor helped in the selection of the course (21.2%), and the dependence on the recommendation of friends and relatives (41.2%).

In general, students feel that they need more guidance in selecting programs and in career choices. In a career needs survey conducted by the Bureau of Educational and Vocational Guidance[12], students ranked their needs in the following order:

1) A school should have information and material available to help students make decisions about future choices of career.

2) Every student should have qualified guidance counselors available to help him/her make more appropriate life career plans.

3) Every student should complete high school with a saleable skill which he/she can use on a job.

4) Every student should be helped to explore the many high school, college and occupational training program options available to him/her so that more realistic career choices are possible.

5) Students should be permitted to miss a few regular classes in order to go on field trips to business, industry, or colleges.

Certainly, more attention should be given to those areas targeted by the students as lacking support from the school system.

Students are attracted to programs for a variety of reasons. The most desirable programs are those that have the closest relationships with the private industries for which they are training students and have the best job placement opportunities. Some schools, such as the School of Printing, work closely with the appropriate trade union, which provides on-site shops. Garment union officials regularly review equipment at Fashion Industries High School. Professional designers critique student work at

this school. At the School of Art and Design, many teachers are practicing artists. Courses at Aviation High School are geared to meet state licensing requirements.

Other equally effective programs are less well known to students who depend largely on word-of-mouth reputations for their choices. For example, pre-engineering and drafting programs at Alexander Hamilton High School are not as much in demand, although a major employer in the field helps to keep the program current and recruits its graduates.

Much of the success of a program also depends on the attitudes of the teachers. In the machine trades, the teachers are tradesmen in the field, and provide the students with a frame of reference to the working world. Shops seem to be run like businesses. Relationships are formed with teachers because of the better student/teacher ratio, with more interpersonal contact. Many of these teachers, however, are ready to retire and students who are beginning the course sequence now may not be able to complete it because of the impending lack of instructors (see Chapter III). In the field of data processing, many of the teachers are new and are in training to learn the program themselves. In one school, a teacher who had completed all the in-service courses last year was excessed and so the AP was again trying to update the existing staff to offer the courses. Teacher recruitment and retention is an area which affects the students daily. The Board's inability to be competitive enough in salaries to attract personnel may indeed cause some of the programs to be eliminated.

In Federal or State-funded programs where, sometimes, the teacher cannot be hired in a timely fashion because of procedural or fiscal difficulties, the program's start is delayed, and students do not receive

a full program. In other areas where the programs exist, but are not geared to a wide enough range of levels, less skilled students often lose interest and drop out.

For whatever reason that attracts them to the course, there are factors which cause students great frustration. For example, when signing up for an educational options program, which is offered as a less intensive alternative to a full vocational curriculum, the student has no assurance that it is a worthwhile program. Excellent educational options programs exist in high schools that are solely devoted to these types of courses, such as Murray Bergtraum and Norman Thomas. In other cases, the option may be, in fact, nothing more than one or two courses in the subject, or it may consist of courses that do not meet frequently enough to provide useful training. Sometimes, students from zoned high schools whose school is an educational options school can't fit into the program because of equipment shortages. At Boys and Girls High, for example, 150 students are in data processing as an educational option and another 155 zoned students have asked for the course. Certainly, it would be an effective use of funds to supplement the equipment in this school so that the in-house computer could be utilized at a maximum level to accomodate the additional students. Students in zoned schools would then have an attractive program, and the curriculum could be developed to accomodate all ranges of students.

The range of skill levels offered within the program is also important for all occupational training courses. Every teacher and AP interviewed in the fields of data processing and machine trades expressed real concern about their ability to give the weaker students a reason to remain in the course. If vocational programs are a partial answer to the high

school dropout rate, then they must also be geared to those students who have experienced academic failure and may be most likely to leave school.

The varying curricula of vocational programs also reflect the erratic nature of central coordination. Although there should be variations in curriculum because of differing student populations, a core of knowledge and skills should be common to all programs within a field. In virtually all the programs, except those few which must meet state certification, the students are using curricula that are wholly developed within the school. Graduates of a particular shop or business course from one school do not necessarily have the same skills as those who took the course elsewhere. In addition, it is very likely that curricula being used do not reflect the real needs of the private sector. Lacking input or review by private employers, they are often outdated or are not geared to an appropriate entry level that the student can realistically aspire to. Some individual instructors keep in touch with contacts in the field while others do not. Such contact not only can improve the relevance of the curriculum and equipment, but it may also be an important management tool. For example, there are certain fields where the most modern equipment is an absolute necessity, and others where older equipment is still appropriate. These situations must be assessed by the Board with assistance from the business and industrial community.

Aside from having appropriate equipment, equipment must be maintained to the greatest extent possible. A student whose typewriter is broken, for example, has little incentive for coming to class. Restrictions on a principal's flexibility in using OTPS (Other Than Personal Services) funds further compounds the difficulty in equipment maintenance and installation. (See Chapter V)

There is little opportunity for a student to assess the specfic

offerings at a school. And given the diversity of programs, the choice of which school to take a particular vocational course in could be a very crucial decision.

Work Experience and Job Placement

How well the whole program relates to potential job opportunities is very important. Students need to know that the courses are relevant to keep them in school, and the best way for them to hear it is from members of the private sector at a working experience. The private sector should also be involved to review the program and in follow-up of graduates whose assessments could be utilized in improving the courses. Private sector involvement is very important at every stage - curriculum development, program implementation and review, and job placement. Most studies done of the current educational system support the need for more work experience programs and students themselves have expressed a strong desire to mix work and school. Many of their choices for high schools are based on the work experience they provide and their records for job placement. Again, the schools most successful in these areas are those that maintain close contact with industrial representatives who then recruit graduates of the programs. In one case, the upholstery program at Eli Whitney High School, union cards are issued to those who complete the required courses.

A recent survey conducted by the Educational Planning Institute for the New York State Labor Department found that 250,000 city high school students (over 70%) want jobs after school but cannot find them.[13] Part-time work is the first step on the ladder to adulthood. Besides providing an income, it helps students develop needed social skills. They discover that they have to deal with adults on a sustained basis. In addition,

students often recognize the importance of having basic reading and math skills and how these skills relate to work. The Carnegie Report strongly recommends that attention be focused on assistance programs for youths at the troublesome years, ages 16-17, and further supports their needs for employment. "The most dangerous hours are weekdays 2:00 to 6:00 P.M., between the time when many, even most, students 'split' from schools and the time the parent or parents arrive home from work." [14]

Work experience programs should be expanded within the school system through more concerted efforts on the part of the Board to get additional funds from a variety of reimbursable programs. These experiences serve a number of important functions: exposing the student to the world of work; permitting students to use the most current machinery; allowing those students who need financial assistance to stay in school the opportunity to earn money; and exposing the business world to the local high school students. Although only 17.7% of the graduates indicated that they will seek full-time employment upon graduation, with the remainder of the graduates going on to advanced education, (academic or technical)[15], this figure does not reflect the number of students who have been lost to the system since 9th grade. Some of these dropouts may have been inclined to stay if they were able to attend non-academic job-oriented courses and if they were able to divide their time between school and work. At DeWitt Clinton High School, where the school-wide attendance rate has averaged 67-68% for this year, the occupational education programs have faired much better: health services, 85-90%; animal care, 77%; pet grooming, 85%; horticulture, 80%; and Cooperative Education, 93%. The principal attributes the attendance to greater student interest, and is actively using occupational programs to prevent students from dropping out.

Currently, should a student desire part-time employment or unpaid work experience, he or she must delve through a variety of placement programs within a school and through a variety of counselors and resources. At the same time, if an employer is trying to find a student for a position, he or she is subject to the same confusion.

Another way to expand work experience programs is to increase opportunities at the Board of Education itself. Currently, students participate in food services to the energy factory at the Benjamin Franklin Cafeteria. In Chapter V of this report, we highlight those students at Samuel Gompers who repair Board of Education typewriters. In addition, in the course of the study, experts in the field of data processing in the private sector have suggested a curriculum based on programming needs of the Board itself. The Board is currently establishing several new management information systems and students could contribute their resources and time instead of working on hypothetical problems from text books.

There should be centralization of job placement and development, both in the school itself and at the Central Board. Also coordination with the services provided by such programs as the New York State Employment Services is important. A mechanism for schoolwide placement service should be established and communications between the Board's job development programs improved. Currently, there is nothing to prevent all the programs from contacting the same potential employers or trying to place the same student while a large number go unserved. Different federal programs each have their own placement service and job placement is also available from the New York State Employment Service. NYS Counselors are in 51 schools, 5 of which are vocational.

An interview with the director of the NYS Employment Service indicated that its emphasis in job placement is in the comprehensive schools because

it has had better luck in placing students with white collar firms. Interestingly enough, this is primarily because many small industries close for vacation in the early summer, which reduces the availability of jobs in which to place the vocational student for permanent employment. Surveys are conducted of all seniors, with services then geared to those who are work bound, have some uncertainty in their school choice, or who are planning to attend school part-time. The program does serve to give the students some formal placement assistance and it, or some similar program, should be available on a wider basis. Certainly, a more centralized source of placement should be available for both the students and the employers to facilitate the two groups getting together. The schools must accept this role in providing students with work experience and placement, and involve the private sector in this role. Ninety percent of the businesses in New York City are small businesses. Therefore, contacting these businesses for jobs for students is essential, and the Board must find some way to provide clearinghouses within the schools or communities to make full use of these resources. The EPIC program (see pages 80-81) has addressed this in a small way, and the importance of expanding efforts in this vein cannot be ignored.

In summary, from the students' point of view, the overall picture of vocational training programs is very uneven. It is apparent that many strong programs do exist, and on the strength of the reputation of these programs (as well as a possible aversion to zoned high schools) the demand for vocational education remains high. The sad conclusion is that these programs exist without the assistance or coordination of the Central Board. Let us look now at some of the central operations of the "voc ed" system to identify the causes of the problems and recommend solutions to them.

CHAPTER III

CENTRAL ADMINISTRATION

FINDING: All types of high schools offer occupational or vocational programs, but there is no existing structure to guide or coordinate course offerings or support services in the system as a whole, including programs in the districts.

Planning for vocational programs is done by the Center for Career and Occupational Education (CCOE), but the actual choices of and operations of most of the programs take place in the high schools, under the control of the individual principals. Suggestions can be made to the schools, but there is no way to ensure that principals' choices are based on labor market demands and knowledge of other course offerings available to students.

Because of the past and still-remaining difficulties in implementing occupational and vocational programs in the high schools, and the conflicts within the divisions at the Central Board over which office should have responsibility and receive the funding for the programs, a number of studies have been conducted since 1974 which deal with the issue of reorganizing the current structure to improve the delivery of vocational education.[16] The most recent was completed in 1979, and after the Administration studied the possibility of reorganizing, it has chosen a different route. The resulting increased dialogue between the Division of High Schools and the Center for Career and Occupational Education is encouraging but more can be done to improve coordination within the system. The studies done in the past touched on various aspects of the delivery and management of occupational and vocational education, yet

the Board has not instituted any major changes in response to them. This failure cannot be ignored. The need of overall improvement of Board procedures involved in these programs remains acute.

This section explores the relationships between various units at the Board and how they coordinate their responsibility for vocational education.

I. Coordination between the Center for Career and Occupational Education and the High School Division.

FINDINGS: The widely acknowledged lack of coordination between CCOE and the High School Division has resulted in:

a) lack of a mechanism to coordinate city-wide or borough-wide services;

b) neither unit taking responsibility for tax-levy funded programs;

c) principals and superintendents having divided loyalties;

d) the sporadic placement of funding and programs in the high schools;

e) programs whose goals and curriculum are determined by their funding rather than any assessment of needs;

f) the H.S. division having inadequate input into or knowledge of the vocational programs in their high schools.

One solution to the lack of coordination between CCOE and the High School Division would be to merge the two units. There are a number of reasons why this would not be advisable. Career and occupational education are a part of the total education system, from kindergarten to 12th grade, and it is difficult to separate them solely into the vocational high schools. The Division of High Schools has traditionally been concerned with academic programs and the attention given to vocational programs has been minimal, especially since the elimination of the Superintendent of Vocational Education in the 1960's. Most occupational and vocational programs, therefore, relate in a stronger way to CCOE.

The vocational schools work within their organization of Vocational Principals, with a great deal of assistance from the Trade and Technical Unit of CCOE. Most of the other efforts by CCOE are directed at those comprehensive schools which have expressed an interest in upgrading or augmenting their programs. When a school is undergoing an analysis for capital improvements, CCOE is a part of the team to help analyze the needs of the students, assessing the plans presented by the school in relation to broader issues of job opportunities, equipment needed, and appropriateness of course offerings. Generally, however, the units at CCOE deal with the Assistant Principals or Department Coordinators of a specific career area at the school level. Nevertheless, CCOE cannot coordinate city-wide services.

CCOE has recently developed borough-wide analyses of the occupational delivery systems, called mini-plans, which encompass general population trends, the occupational education services, and matching training resources to employment opportunity. The plans, however, do not reflect the demands of the students nor the recent application and admission trends. These plans can be of great use in the overall planning within boroughs to provide students with a variety of options, to limit duplication of course offerings, and to provide a greater concentration of resources in specific vocational areas where courses are currently being conducted. By providing an analysis of needs in the boroughs, there can be improved coordination of Shared Instruction Programs and After School Occupational Skills Programs on a borough-wide basis (see Chapter V). The borough's employment needs were assessed locally through the Community Planning Boards and any existing industry councils in each borough, and

are the most borough-specific data that are available at this point. However, principals interviewed were not even aware of their existence. These mini-plans can provide a good starting point for improved planning, and can be valuable resources for the principals, who have neither the time nor the opportunity to collect employment data or survey the variety of offerings in nearby schools. With the addition of student demand factors and trends in applications and admissions, the plans' value can be enhanced.

The best channel for coordination of services would be the borough superintendents, but they have not been involved in the development of the plans, and their first loyalty is to the High School Division, not to cooperation with CCOE. The strongest occupational programs depend upon the leadership in the individual school and the intense interest in providing the occupational courses by the principal. What has resulted has been sporadic placing of occupational programs in those high schools which cooperated with CCOE, with no enforcable overall planning and allocation of resources. (See Table 4 and Table 5)

Looking specifically at the percent of tax levy teacher time spent in the vocational high schools for those courses meeting 10 periods a week, the range is from 22.4% (Jane Addams) to 55.2% (Aviation). There is a variety of reasons for the differences, including the type of program offered and the use of reimbursable monies to pay for vocational courses. In the fall 1979 term, reimbursable monies at William Maxwell, for example, where 24.5% of the tax levy dollars are spent on vocational education, amounted to $298,570 of which $69,570 was for student stipends. Alexander Hamilton, which spends 36.7% of its tax levy dollars on vocational programs, received $86,000 in reimbursable monies, of which $50,000 was for student stipends. Aviation spending 55.2% of its tax levy dollars on vocational programs, received $202,670, of which $5,800 was for student stipends.

Within the vocational schools, the principal makes the decision on what types of courses he or she can support with tax levy dollars, relative to the overall needs of the school: whether by offering a particular vocational program other courses can be maintained, or whether that course cannot be offered without the support of reimbursable monies. In order to make appropriate funding decisions, CCOE must collect this information.

In the comprehensive schools, the situation is also unclear. In examining the numbers of VEA funded programs for FY 80 offered in the different schools in Manhattan, the number ranged from a school having one specialized program in Fashion (Art and Design) to having 11 programs (Brandeis). 17 of the 19 Manhattan schools received some form of VEA assistance. In Queens, Martin Van Buren and Hillcrest had 10 programs, while Richmond Hill was involved in four.[17]

With the lack of an overall plan and with the great bulk of the funds for the occupational programs coming from reimbursable sources, it is felt by some administrators that the funds dictate the types of programs that will be offered in schools with little overall assessment of the total needs of the schools and a lack of input on needs from the schools themselves.

One fundamental problem in the current structure is that CCOE only has responsibility for programs which are reimbursable, and up to this point, no Central Board Division has taken responsibility for tax levy vocational programs.

In addition, because the reimbursable funds are controlled by CCOE, the High School Division has been minimally involved with the setting of priorities among occupational programs and, although all the data is available at CCOE, the Division of High Schools has not been kept abreast the various occupational programs that go into each school, nor of the updating of existing curriculum as related to business and industry needs.

Much of this confusion exists because occupational education has not been a priority at the highest levels of the Board of Education. However, with increased student and political interest in the area of occupational education, the Board Administrators appear to be placing more emphasis on occupational offerings and on developing a new position within the high school division to be responsible for vocational education. As of the 1979-80 school year, CCOE has been removed from the Division of Educational Planning and Support, and its head reports directly to Ron Edmonds, the senior assistant to the Chancellor for instruction, thus giving it major division status. The Chief Administrator of CCOE also sits in on the policy committee meetings with the Director of the Division of High Schools and Special Education, a new duty as of this year. The implication of this change is a stronger emphasis on vocational and occupational programs, with increased opportunity for dialogue among the major divisions at the Board who are serving students. Some see vocational education as a possible solution to the high dropout rate in the high schools. With this increased attention in mind, improved coordination at the Central Board should be a high priority in order to maximize the programs and the additional funds.

To deal with many of these problems, the Board has emphasized increased dialogue between the Division of High Schools and the Center for Career and Occupational Education. In March of 1980, the High School Division, in conjunction with the Center for Career and Occupational Education, has undertaken a major effort in twelve targeted schools "to address the problem of providing sufficient programs for students desiring vocational education and to improve the quality of school offerings, thereby increasing the desirability of certain schools."[18]

The 12 high school principals, the 5 superintendents, and representatives of the CCOE and the Division of High Schools are coordinating their efforts in this pilot program, with CCOE continuing to have the responsibility of monitoring the programs and the Division of High Schools evaluating the programs to determine whether the program's goals are being implemented through the curriculum and teaching. In this pilot program, the Board is attempting to have the schools assess their occupational programs according to need with the assistance of the units at CCOE, and is planning to involve community groups, business interests and parents at higher levels in the local schools.

The plan provides for a concerted effort to link tax levy and reimbursable funds. Each school is working to develop a plan based on current offerings, what entry level skills the school wants to teach, what the qualifications of the teachers are, courses they want to offer, sequences, curriculum, status of facilities, projected student enrollment, anticipated program completion and placement, and description of equipment and needs. It should be noted, however, that the principals were able to select the areas of concentration for programs with no reference to

the findings of the "mini-plans". This project can provide the Board with the opportunity to examine possible structural changes that can improve coordination between CCOE and the Division of High Schools.

Specifically, the Panel recommends the following:

- The borough mini-plans developed by CCOE should be distributed to all the high school principals and used in their meetings with the superintendents. Student demands and application and admissions trends should be included in the plans. In addition, the charts of the course offerings contained in the mini-plans should be incorporated into the high school directory, to provide more exact information for the guidance personnel, students and parents in determining the actual offerings in the schools.

- Coordinating and planning occupational programs should originate with the Division of High Schools and CCOE, and should include both reimbursable and tax-levy funded programs. This planning should involve the superintendents directly, who have a greater sense than the Central Board of the urgent needs of the schools, and can help negotiate the goals and objectives of the entire borough to assist in getting changes made in the high schools.

- Efforts must be made to give the principals a more holistic picture of what funds they receive, other programs being offered and what possibilities for funding and programming exist, and to provide more flexibility with the available resources. The current pilot program with the 12 schools should be assessed in the fall to determine its effectiveness in providing this assistance.

- The current increased dialogue between the High School Division and CCOE is endorsed, with the recommendation that a formal mechanism for interaction be developed as a result of this experience.

- More emphasis in the High School Division should be placed on occupational programs so that they can be placed throughout the system in a coordinated manner.

- The High School Division has indicated a stronger interest in occupational program development, which we encourage. In developing a new position within the Division, however, there should be no duplication of CCOE's activities.

- Patterns of funding and program placement should be analyzed to determine the degree to which student needs are being met. For further recommendations regarding funding, see sub-Section IV, "Budgeting".

II. Coordination Between the Center for Career and Occupational Education (CCOE) and Other Units at the Central Board

A. Bureau of Educational and Vocational Guidance (BEVG)

FINDING: Unlike the confused relationship between CCOE and the Division of High Schools, the major problem between CCOE & BEVG is not one of lack of coordination. Rather it is one of duplication of efforts between BEVG and the Career Education Unit which is the guidance planning unit of CCOE.

The reason for this multi-faceted delivery of career guidance services appears to be one of perception: the two units have different approaches and different focuses. A general feeling that BEVG is more college-oriented while CCOE is more geared to the occupational choices prevents all the guidance from being centralized. Although the Panel is generally supportive of a variety of approaches in delivering services to students, we are concerned that in providing the variety, administrative and developmental costs are increased, and the actual delivery of services is curtailed. Some VEA funds which come to CCOE for guidance purposes are funnelled to BEVG. There is no reason for CCOE to retain any of these funds to duplicate the creation or administration of guidance programs. In addition, BEVG received $343,666 in tax levy personnel funds for 1979-80 for career guidance.[19] BEVG has the personnel to provide guidance, and with some support from CCOE, it can strengthen its career guidance programs.

The activities of the two units are largely duplicative. For example, the Career Education Unit of CCOE was started to infuse career concepts in the schools and, primarily through the Occupational Education Support Team, it arranges trips to industry, workshops for the students, class activities, and instruction units that it conducts in the school at the

request of the teachers. BEVG runs a similar program as a part of the total VEA package. Although this program is not based on a team coming into the school, it provides the schools with materials to help them coordinate career information into the school in whatever way the school feels would work best -- new units, cycles, new curriculum, etc.

The Board claims that coordination with the Career Education Unit and BEVG is ongoing through the Steering Committee that has been established with the Bureau of Educational and Vocational Guidance, and CCOE's Occupational Education Units (Trade and Technical Business and Distributive Education, Health Careers, Industrial Arts, Agriculture and Horticultural Education, and Home Economics) and the Career Education Unit to establish guidelines for a minimum level of activities in schools for occupational education. Cooperation such as this is supported by EPP and we would hope that their findings on minimum activities are adequately distributed to the schools for their information and use.

EPP makes the following recommendations:

- An assessment of all career guidance programs should be made jointly by BEVG and CCOE, with input from the principals, to determine if target populations, program goals, and methodology are different enough to merit the current number of programs and variety in administration of these programs. If not, the CCOE Career Education Unit should discontinue its guidance activities. Consultation is suggested with the State Education Department to ensure that adequate funding for career guidance be continued through VEA, and is not contingent on a large variety of pilot programs, but rather programs that can impact on the greatest number of students.

- CCOE should contribute to BEVG two reimbursable funded people who have more specific vocational guidance experience to give BEVG a broader base.

- The Steering Committee on minimum level of activities should distribute its findings to all principals and superintendents. The placement of these activities in the schools, which include trips to industry, resume writing skills, and learning how to fill out applications, should be monitored by the Division of High Schools.

B. Division of Special Education

FINDING: There is a severe problem in the vocational schools which run at full capacity, making it difficult for Special Education students to get access to the shops.

This study does not directly address the issue of providing vocational education to special education students. However, examination of overall coordination of the vocational education system revealed the above finding.

As previously mentioned, Special Education students in the vocational schools are either mainstreamed, as in Westinghouse Vocational High School or have special shops, as at The School of Printing. In the comprehensive schools, students tend to be mainstreamed into regular shop classes. It is here that insufficient access to unused or under-used shops seems most wasteful. Generally the Division of Special Education uses industrial shops for which there is not much other demand. Special Education Personnel report that they spend a great deal of time looking for available shops, yet this information is already collected at CCOE.

Furthermore there are some funds available from the Division of Special Education that could be used to provide extra units for high schools for an additional shop teacher where there is a significant special education population mainstreamed or where a special shop is provided for them.

Specifically, EPP recommends:

- A mechanism be established to apprise the Division of Special Education of all Industrial Arts shops and equipment that are underutilized in the schools and which could be available for their programs. The borough surveys (mini-plans) contain these listings and the information should be shared with the Division of Special Education to encourage the use of these shops for Special Education students.

C. Advisory Council for Occupational Education

FINDING: Although the Advisory Council exists to involve business and industry in the development and review of occupational programs, there is no mechanism to ensure that their recommendations or the recommendations of their smaller commissions are given serious consideration by principals.

The role of the Advisory Council will be fully discussed in Chapter VI.

III. Duplication of Fiscal Function at the Central Board

FINDING: The duplicative divisions that exist for the fiscal management of reimbursable funds in the area of occupational and vocational education cause management inefficiencies through adding time, paperwork, personnel, and sign-off responsibilities to a host of offices within the Board.

Within the Center of Career and Occupational Education, which is a "responsibility center" for receiving reimbursable monies at the Board, the Program Management and Operations Unit is the fiscal arm. Other units at the Board concerned with the funds are the Office of Funded Programs, which has two professionals assigned to vocational programs, and the Office of CETA Administration, created in 1979, which assigns 5-6 people to CCOE programs.

The Program Management and Operations Unit of CCOE, with 12 reimbursable positions, has four major functions: proposal development and budget preparation; auditing; inventory control; and personnel. Specifically, these functions include:

- recording expenditures for purchase orders, requisitions, and payment vouchers
- performing on-site audits
- maintaining expenditure ledgers
- auditing BACIS (Business and Accounting Computer Information System) reports for CCOE

- preparing budget estimates and proposals
- preparing budget modifications
- preparing and submitting educational modifications to BACIS
- maintaining an inventory of equipment
- preparing final reimbursement claims
- preparing program staff allocations
- reviewing position control notices, position evaluation requests, and vacancy notices for submission to Central Budget and Personnel.

FINDING: The CETA Administration Office duplicates many of the functions of the Program Management and Operations Unit.

Interviews with the CETA Administration Office indicate that they are also responsible for submitting the modifications to BACIS, preparing budget modifications, and assisting in the reimbursement claims.

FINDING: The role of The Office of CETA Administration in relation to CCOE's role in securing funds is duplicative. Negotiations with DOE for CETA programs has been done by CCOE for a number of years, and interviews with DOE personnel indicate that the Director of CCOE, George Quarles, is well respected as a representative of the Board of Education. In addition, the increasing dialogue between DOE and CCOE is occurring in part because of the DOE willingness to work with Quarles. The CETA Administration Office is also supposed to work on getting additional grant money and coordinate Public Service Employment (PSE) at the Board with the Youth programs (YETP). Although the CETA Administration Office has obtained PSE funding, none of it is for vocational education programs. It has yet to establish credibility in getting additional monies for these programs, and no completed proposals have surfaced from this office at this time. It is certainly more likely that any additional monies would be granted to a unit with an established history of grant applications and awards, such as CCOE has demonstrated. Also, the CETA Administration

Office is planning to place students in YETP programs in PSE employment. This does not fulfill the terms of the contract with DOE which require that 30% of the participants in YETP programs be placed in unsubsidized employment (PSE is subsidized work). DOE administrators indicate that this requirement will be stricter next year with "the intent being beyond placement for the programs and more emphasis on long-term placement." [20] Certainly, PSE employment at the Board is not long-term placement and developing a close relationship between the two programs appears to be in opposition to the Federal regulations.

FINDING: The Office of Funded Programs provides an added layer of responsibility to CCOE that could be eliminated. The Director of the Office of Funded Programs (OFP) indicated that they are related to CCOE in terms of a "growing sharing of the roles," with OFP processing materials and getting Board signatures necessary to apply for grants and receive funds. They assist CCOE in providing summary data for the proposals and in developing the necessary resolutions. In addition, OFP staff are invited to sit in with CCOE on discussions for guidelines in programs, and in examining CCOE programs to ensure that they do not conflict with other Board-funded programs. This work is done by 2 professional level people at OFP and is an unnecessary use of time. As previously mentioned, the Director of CCOE now sits on the Policy Committee of the Board and therefore any conflicts with other programs could be dealt with at that level. CCOE is no longer so completely separated from the rest of the Board's programs to require this added layer of review. Therefore, the only services required from OFP are getting the appropriate Board signatures and developing the resolutions, which are more clerical than administrative. EPP feels that these functions should be transferred to CCOE, with the

corresponding funds allotted to OFP also transferred.

In both OFP and the CETA administration office, at least 7 individuals paid by reimbursable sources are performing duties duplicative of CCOE, and the positions should be eliminated. The corresponding funds should then be transferred to CCOE, with efforts made to eliminate the tax levy funding at CCOE ($217,604). This funding represents OTPS and 11 positions. EPP is not recommending that the particular tax levy positions be eliminated, but rather some positions transferred to reimbursable sources. EPP recommends the following:

- As CCOE is a responsiblity unit for reimbursable funds, it should have budgeting responsibility for the programs, with the final fiscal development and sign-off done by the Office of Budget Operations and Review. Pass-through of budget items to the Office of CETA administration should be eliminated. The corresponding funds alloted to this unit for CCOE-related functions should be transferred to CCOE, which will offset a corresponding reduction of tax levy dollars for administration.

- The functions performed by the Office of Funded Programs should be performed by an administrative assistant within the budget unit of CCOE. The corresponding funds alloted to OFP for these functions should be transferred to CCOE, with the additional dollars assigned to assist the schools in grant writing. These will also offset a a reduction in tax levy dollars.

IV. Budgeting

As shown in Tables 2, 3, 4 and 5, the funding for vocational and occupational education is both tax levy and reimbursable. With the current fiscal constraints and the strong emphasis on basic academic programs, the tax levy-funded occupational courses are often the first programs that are cut. It is interesting to note that vocational courses are primarily judged on job placement results, while the outcome of academic courses are not weighted in a similar fashion. One administrator stated that academic courses are often expanded if the results in reading and math skills are unsatisfactory

while no consideration is given to the dependency of job placement on such factors as basic literacy and numerical skills, which may not reflect directly on the skills training course.

FINDINGS:

a) The total amount of tax levy funds expended on vocational and occupational areas is difficult to trace, as many different criteria are used for different funding, and any tracing that is done is to justify the use of Chapter 399 funds, for which the 1978-79 dollar figure is $5.7 million (see pages 9-10).

b) Many principals and administrators feel that the needs and priorities for grant proposals are not coming from the schools themselves, but rather are established by CCOE.

c) The criteria for the distribution of funds to the schools by CCOE are unclear or contradictory.

d) Individuals in the schools felt that who received the funding was often predetermined by CCOE.

e) Funds are frequently not concentrated enough to provide adequate training in favor of a diffusion of funding which produces a larger number of courses.

f) Some education option courses are not adequately intensive to provide useful career training.

The Board estimates of expenditures in the occupational and vocational areas are not all-inclusive, as business and distributive education are not counted as occupational programs, primarily because they are difficult to track throughout the entire system.

It is often assumed that the bulk of expenses in the vocational high schools is spent on vocational education. Interviews with the

vocational high school principals demonstrate that the teaching units spent on academic and vocational courses are split at a ratio of 50% academic to 50% vocational. (See Table 5 for tax levy teacher time in vocational schools.) Other Than Personal Services (OTPS) money was primarily geared toward the vocational programs. It should also be noted that the vocational schools are receiving the same amount in OTPS for 1979-80 that they received in 1973, despite inflationary trends.

Tax levy monies are used to pay for established programs. (See Table 4 for a list of programs.) The Vocational Education Act (VEA) is primarily to start new programs and maintain them for three years in addition to providing money for equipment. Those programs funded by VEA which are deemed to be successful after the three-year period are supposed to be taken over by tax levy dollars at the principal's discretion, but often these decisions are made without reference to what is available in nearby high schools. This should involve a gradual change in course offering or content every few years and 90% of the VEA programs are picked up by the schools each year.[21]

In order to be in a position to distribute reimbursable monies in the most effective way possible, CCOE must be aware of the use of tax levy funds within the schools, the current programs being funded, and the demands of the students in each school. EPP has not been able to examine this total picture within the scope of the study. No single central source at the Board is collecting and reviewing such information. Only the principals are aware of their own programs and student demands. However, they are not aware of the demands of incoming students nor the latest labor market statistics. This situation does not maximize the planning assistance that could be received from the

sources at the Central Board. What we have found are preliminary indications that there are problems in the distribution of programs.

The borough mini-plans contain a preliminary assessment of the offerings in each borough, which range from 41% of the total Brooklyn secondary population receiving occupational training in at least one of seven occupational clusters, to 28% of the Bronx secondary population having the same opportunities. Manhattan had 40% of the students receiving occupational training; Staten Island, 33%; and Queens, 39%. The offerings in the academic comprehensive schools also have a large range, with the Bronx academic schools providing 19.2% of the students with the occupational offerings: Manhattan with 24.6%; Staten Island with 31%; Queens with 37%; and Brooklyn with 40%. Within the boroughs, the range is even greater.

In Queens, for example, the percentage of students receiving occupational education ranges from 19% at Beach Channel to 55% at Andrew Jackson. In Staten Island, the range is from 4% at New Dorp to 48% at Curtis. All of these figures are based on the population served by the schools, which necessarily includes students who are taking courses outside their boroughs in educational options or vocational schools. In addition, the mini-plans point out the large percentage of students enrolled in business and distributive education in the academic schools; from 67% of those in Brooklyn to 83% in Manhattan.

Because of the difficulty in tracing actual tax levy dollars spent on occupational and vocational programs within the Board, due to the variety of formulas used to reach a figure, this report addresses primarily the use of reimbursable funds, $17 million of

VEA money, and $8.85 million of federal Comprehensive Employment and Training Act funds. Both funds come to the Center for Career and Occupational Education.

As previously mentioned, the Chief Administrator of CCOE is also the head of Planning for Region 2 for VEA funds. Thus, the plan for programs within Region 2 (which consists solely of New York City) to be submitted to the state comes from CCOE. Appendix E demonstrates the procedure for soliciting proposals from the high schools and developing the proposals within CCOE. The Center must follow its plan, and only those proposals which can be made a part of that plan are formally drafted.

Schools have little awareness of the types of programs which could be funded, or what criteria are used by CCOE for deciding to give one school added equipment over another. Members of CCOE, on the other hand, indicated that the criterion was the amount of money a school had received in the past from reimbursable money. However, it is not clear whether the intention is to favor schools that have or have not formerly received funding. Sometimes money is given to schools which have not received much VEA monies in the past in an attempt to spread resources. In other instances, where principals have complained that their proposals are turned down, the response at CCOE was that these schools probably had a past history of not making the best use of their funds, and would not be likely candidates for new money. Schools that had received money in the past and put it to the optimum use would get the funds.

This confusion points to a major philosophic dilemma in funding occupational and vocational programs in the city: should programs be more comprehensive within the school and as up-to-date as possible for those

students who are taking the course, or should the Board try to provide a greater number of students with an exposure to some type of occupational course, even if that course does not equip the student with sufficient job-related skills. The Board does not appear to have a stated policy on this setting of priorities. The general feeling of the vocational principals that they get little funding from the Central Board other than equipment indicates that the current practice is to spread the programs out to as many schools as possible.

EPP is concerned that the distributing of programs to the maximum number of students is not serving the students in the most effective manner. What results is a great variation of intensity in programs within the school system which is not evident to the students. This can be illustrated with the educational option programs.

An educational option program, as defined by the Directory of the Public High Schools, is "a three year sequence of courses which prepares students for jobs in a career area, as well as for college."[22] Appendix F lists the educational option courses in the New York City high schools. Although "ed op" courses are supposed to be an alternative to vocational training, they do not usually provide as concentrated a program as the vocational programs which must meet ten times a week.

Many programs such as the Urban Management and Construction option at Boys and Girls High School, the Humanities and Arts option at Far Rockaway, and the Humanities Mini-School at Julia Richman are an identified series of academic courses, but none of the courses meet 10 periods a week, and therefore they are not heavily concentrated courses. Other educational options such as the Experimental Independent Study at John

Dewey, and the Experimental School and Independent Study Program at Edward R. Murrow may be alternative options for education, but programming cannot claim to be related to any preparation for either a specific job or college major. Other programs that are more oriented to a specific career, such as the Pre-Veterinary Studies and Animal Care option at Abraham Lincoln, the Pioneer Law course at Andrew Jackson, Criminal Justice at John Jay, and the Institute of Oceanography, do not receive adequate tax levy or specific reimbursable funds to provide a concentration in these areas, that is to meet ten times a week.

Other schools offering educational options have programs which receive both tax levy funding and reimbursable funds and do meet ten times a week; for example, Aviation Careers at August Martin, the Center for Administration and Management at James Madison, Computer Science at Murray Bergtraum, and Accounting and Data Processing at Norman Thomas.

Some courses, however, are not three year sequence nor are they supported by a concentration of tax levy funds. One specific example of this is the Computer Science option at Boys and Girls High School, which does not meet in a concentrated fashion. Reimbursable money for VEA funds is received for business office and youth programs for disadvantaged youth, and for vocational work study and cooperative education.

This variety of options illustrates the lack of minimum standards or equitable funding formulas for educational options programs. While some are worthwhile alternatives to vocational education high schools, others are empty promises. A particular contrast can be seen in the those schools that offer a mix of programs.

An example of a mix of vocational education and educational options programs exists at Park West High School where there are three educational options courses (Pre-Technical Electronics and Small Appliance Repair; Automotive; and Aviation) as well as a vocational program in the food and maritime areas. Of the ed op programs, only the automotive course has sufficient tax levy monies invested in it to meet 10 times a week, with no specific reimbursable monies for automotive courses, although the school participates in the After School Occupational Skills program and a number of programs for handicapped students in vocational training. For the other educational options courses, there is no strong funding commitment. It does not appear that the school is concentrating or strengthening its options offerings.

EPP feels that, to be effective, programs should be offered at a more concentrated level than one or two courses to constitute an entire educational option. If there is no demand for the programs, the programs should be changed, but a diffusion of funds among a variety of educational options within a school prevents any student from getting a valid educational option.

It is particularly ironic that, in a school that <u>does</u> offer two concentrated vocational education programs, it cannot offer those same subjects as educational options for those students who do not pass the entrance examinations for the vocational programs. In this way, the school could concentrate its funds and offer more occupational preparation to all its students. This would maximize resources in curriculum development, staff expertise and use of equipment.

The inconsistency of funding is also illustrated by the data processing field. Sometimes these programs are inadequate. In examining those schools which have in-house computers, we found one school had

just initiated hands on experience as a part of the course. None of the schools have enough keypunch machines to give the students as much practice as they would like, primarily for entry level skills as operators, and do not in fact, focus on training the students for entry level skills as a primary goal. The schools have the main computer to hook up more terminals, and almost all of the Assistant Principals expressed strong desires to strengthen their courses, to offer the three tracks of keypunching, operations, and programming. Interviews with the private sector indicate that there are entry level jobs for high school graduates who have good skills in keypunching or operations, and it is this track that the assistant principals have indicated is the most difficult to expand. Instead of the money being targeted at those existing programs, it is being diffused to provide a small amount of data processing in several schools, rather than allowing those students enrolled in the courses, particularly as an educational option, to actually have a full offering. The issue is not easily resolved, but the wide diffusion of dollars does not appear to be providing the students with the best training. Programs that could be excellent with adequate funding become watered down to the point where they are ineffective as a result of the diffusion of funds. The Board must deal with the limitations of its funding in the area of equipment, and should leverage its dollars through concentrating on vocational exploration programs and increased work experience components.

Another factor complicating coordinated budgeting is the current variety of calendar dates set by the various sources of reimbursable funds for occupational education. Difficulties are created for a principal in setting goals and creating a school-wide program. Assistance from the Central Board is mimimized and becomes sporadic because of the different dates that must be followed.

EPP recommends the following:

- The current expenditure of tax levy funds for vocational and occupational education by borough in conjunction with student demands and needs and the distribution of reimbursable programs should be used in determining future priorities for funding programs.

- The criteria for determining which schools will receive the funding should be made clear to all the high schools and be established in conjunction with the Division of High Schools. A central policy for improving the programs already in the schools to ensure that they are fulfilling the needs of the students should be a primary criterion.

- Funding priorities should be given to those existing programs with the potential for success that need to be expanded to provide their students with enough concentration of courses to enable them to acquire useful skills in the field. Particular attention is needed in the educational options courses.

- Coordination of calendar dates for grant applications of various programs should be established to ensure that there is sufficient opportunity for the schools to establish an overall needs assessment.

Recommendations regarding expenditures for equipment are listed on pages 89-90.

V. Teacher Recruitment and Retention

FINDING: Difficulties with teacher recruitment and retention are caused by non-competitive salaries, cumbersome procedures and lack of timely licensing examinations.

One of the most commonly stated and serious problems with providing vocational and occupational training for students is the recruitment and retention of teachers. Recruitment difficulties are particularly acute as the majority of trade and technical shop teachers are eligible for retirement or will be in the next 3 to 5 years. Retention problems are more specifically related to Board personnel policies, including selection and temporary per diem certification.[23]

The primary issue in recruitment is salary. Although their working

hours are not comparable, the salary of a beginning teacher is $10,141, and the estimated earnings of individuals in private industry who have the five years experience required to teach range from $14,000 to $17,500. In some of the less "shop-oriented" fields, such as business and distributive education, the difference is not as great, nor is the shortage as acute. Basically, the Board is not competitive with industry in attracting teachers, and a plan of action for dealing with this issue must be devised in the immediate future.

Lack of personnel is particularly acute in the shop areas, and will become even more so in the next five years. The general estimates both at the Central Board and the vocational high schools is that over 50% of the shop teachers will retire or be eligible for retirement in the next five years.

The Board has formed a committee to deal with the issue, and EPP suggests that the following be considered by the committee for immediate use:

- A total analysis of vocational and occupational teaching staff should be conducted by trade and occupation, to indicate which areas will be most affected by the impending retirements.
- The analysis of teaching staff should include data on numbers of teachers who have multiple licenses, numbers of teachers out of license, and those with temporary certification.
- The possibility of giving credit for years of work should be investigated.

In a long range plan for providing for teacher recruitment and retention, EPP recommends that experimental methods be fully explored. A cost benefit analysis should be made of the following possibilities and legislative options explored:

- Contracting out with the private sector for on-site training. In exploring this alternative, the savings made in purchasing and servicing equipment could be weighed against funding the training and insurance costs of placing the students in outside plants.

- Recruiting part-time teachers who can continue to work in private industry. In this way teachers can keep up to date in their field.

- Providing a means whereby skilled persons could provide occupational training without completing all the formal licensing requirements.

The second problem in teacher recruitment is the cumbersome hiring procedures. Labor market difficulties, combined with Board processing delays, make it difficult at all times to fully staff Vocational Education programs. Very few regular teachers are used in these programs, and those that are used are required to take special examinations and are subject to special review by the Board's Division of Personnel. The approval process is very lengthy: in June 1979, from example, 15 positions had been awaiting the Chancellor's approval for 7 weeks; 15 instructors who were needed in April would never be hired; students were not served for the last quarter of the school year; and funds budgeted for the positions will have to be returned to the Federal government.

EPP recommends:

- Personnel approval procedures must be improved to expedite hiring teachers for reimbursable programs.

The last issue regarding retention is the temporary licensing that keeps some starting teachers at lower salaries. In the occupational areas, some licenses have not been open for examinations for a number of years.

- EPP has recommended in the past that the Board of Examiners be eliminated, because it provides an unnecessary function. The State Education Department licenses teachers in other districts, and could do the same for New York City.

VI. Curriculum Development and Program Review

FINDING: Curriculum at the Central Board for vocational programs is developed in two ways: through CCOE's Curriculum Unit and through the standing committees of the occupational units. However, schools receive little assistance in curriculum development.

The Curriculum Unit of CCOE works directly with the Instructional Support System for Occupational Education of the State Education Department (ISSOE). The curriculum unit is not a unit to develop curriculum for the city schools in particular, but rather to provide City input into State Education Department Curriculum. Serving as an office for the SED's Instructional Support System, the curriculum unit gets assignments of trade areas to examine, with the local regions selecting the areas of most interest to them. (See Appendix G). Working with the program directors of the occupational areas, principals, and AP's of the vocational high schools, the unit recruits teachers to develop curriculum, devise staff training, review, and critique State's models.

The unit distributes materials from the SED to the schools, and aside from the critiquing and revising, those who feel they can use the curriculum do so independently. The same is true of the curriculum developed by the occupational units of CCOE (Health, Trade and Technical, Industrial Arts, Agriculture, Home Economics, Business and Distributive Education). What, in fact, results from these units emphasizing compliance and state-wide curriculum is duplication and little assistance in the development of curriculum in the New York City high schools.

Although two units are responsible for curriculum development, the two occupations studied in depth for this report both lack recent curricula. In the machine trades, the last centrally-developed curriculum was done in 1963. None exists for data processing, even though that is

one of the areas the New York region has been assigned by the SED and several new programs are being created.

Although all interviewees stated a need to tailor curriculum to the particular population of the school, they also indicated a desire to get more guidance from CCOE in setting up curriculum outlines.

FINDING: Curricula are developed by individual schools and there is no consistency

EPP examined the curriculum review process in relation to the machine shop and data processing courses. Contact between the people running the programs in the different schools is informal. No minimum curriculum or guidelines exist for either program. The AP's in the machine trades meet with the head of the Trade and Technical Unit, who has set as his priority standardization of curriculum in his areas. It should be noted, however, that this office is responsible for 50 types of training courses, and any standardization will have to be done incrementally. The schools range in their efforts to update the machine shop programs through curriculm and equipment improvements. Some keep equipment and supplies available and running through creative administration. Others accept equipment disrepair as a given. Industry review also varies greatly from contact with one individual off-site to having company representatives come into the school to review the curriculum and equipment annually.

In the data processing field, the programs ranged from full three-year programs to a year's sequence of courses. Although all of the computers have been in place for at least five years, curriculum varies from being fully developed to just being written. Much of the strength of programs depends on the administrators and the teachers and, particularly

in the data processing field, the length of time the teacher or AP's have been in the field. Many are business teachers who are new to data processing.

In the data processing field, the extent of involvement with curriculum development by the occupational unit at CCOE is limited to providing broad assistance to all those schools that don't have any data processing machines. Students are invited to the Board to use the equipment at the Center during school hours to enrich their programs. In addition, CCOE provides broad-based assistance to all the schools which have data processing. Thus, it may be instrumental in providing access for additional students to the field, but not one of the six AP's in the schools with in-house computers, including the two commercial schools which have the most viable programs, mentioned involvement in any curriculum development or review by the Central Board. In addition, where these six schools have joined together in the past as a "users group" to discuss program issues, share curriculum, and compare offerings, the group has become defunct. Its re-establishment would certainly be the ideal mechanism for getting technical input from professionals in the private sector and to begin to establish minimum guidelines of offerings in the schools.

Basically, curriculum is devised independently by the school in consultation with other AP's who have been very active in the area of data processing. One school, where data processing is offered as an educational option course, stated that this is the first year there is an actual curriculum for hands-on experience, although the course has been offered as an educational option for a number of years. That is not to say that individual schools have not updated their curriculum,

but rather any updating has been conducted by teachers and Assistant Principals, most of whom are not comfortable in the role of curriculum development. They would prefer experts in the occupational field and curriculum development experts to provide them with the basic outlines for updated curriculum.

EPP recommends:

- The curriculum unit should be disbanded, as it is not supplying the high schools with a sufficient amount of assistance.

- The responsibility of developing curriculum for use in the school should lie solely with the occupational areas which could take over any responsibilities of the curriculum unit in their respective areas. Curriculum for the trade and technical areas in particular should be developed to meet the entire range of skills in a trade. These units should receive the reimbursable money for the two professionals and one secretary now allotted to the curriculum unit. The inclusion of these funds will offset a corresponding decrease in tax-levy funded positions.

- In order to allow school principals their necessary autonomy while providing them with minimum standards and background information, assistance should be given in curriculum development for vocational and educational option programs. Minimum standards would be modified to meet the individual needs, leading to diversity based on a firm foundation, not arbitrary standardization.

- This responsibility must be accompanied by a strong involvement of private sector employers in particular fields, with the unit director acting in a supervisory role but with the minimum amount of actual additional work load. This is possible through the continued use of the standing committees and by requesting experts in the fields to provide the schools with training guidelines. The standing committees could then use these guidelines as a starting point to develop curriculum geared to high school students.

- The users group for data processing should be reinstated, restricting its participants to the six schools with in-house computers and involving members of the private sector, with a focus on maximization of computer use and curriculum development for computer operators. Other groups in other fields should be developed and a similar sharing of ideas should be formalized.

- The concentration on curriculum development should be in those fields where programs are in place.

Chapter IV

INTERGOVERNMENTAL ISSUES

The Board of Education receives funding for vocational education from the State Department of Education (SED) under the Vocational Education Act (VEA) and under the general state aid formula. VEA money is earmarked for specific programs in the Regional Plan, while Chapter 399 funds are not earmarked. Although the amount of 399 funds allocated is based on the offerings of vocational courses in the City school system, the funds are not allocated directly to the vocational programs but to the City, like all other general aid. Therefore, it is likely that they never get from the City to these programs. EPP feels that Chapter 399 money should be earmarked for vocational education and guaranteed to the Board of Education.

Another source of funds for vocational education is the New York City Department of Employment (DOE) under the Comprehensive Employment and Training Act (CETA). In 1979-80, the Board received $13,562,000 in federal dollars from the Department of Employment, which acts as the prime sponsor for CETA funds. Many problems have developed with the Board's relationship with the New York City Department of Employment. While many of these have been resolved, EPP is concerned that the solutions have been problem-specific and not systematic.

The relationships between the two city bureaucracies, the Dept. of Employment and the Board of Education, appear to be improving, mostly due to the efforts of individuals at CCOE and at the Youth Programs at DOE. During the course of this study, EPP has seen problems which have come to the attention of the two groups. Resolutions have been reached

in some of the following areas:

Leasing of Buildings:

FINDING: Board of Education procedures for leasing space for CETA programs are lengthy and leases often are not cost-effective.

Certain federal monies for vocational edcuation are received under Title IIB Classroom Training Programs which are primarily adult programs. Four million dollars are received a year, including $1 million for enrollee benefits paid directly by the Department of Employment to the participants.

Problems have arisen in these programs from both the Board's red tape and some inflexibility in the Department of Employment policies. For example, difficulties in leasing buildings for the Board's CETA programs arise because of the lengthy procedures within the Board regarding lease agreements. It takes approximately 4 months for the Department of Real Estate to negotiate a lease, which must then go to the facilities planning unit, to the Board of Education for a resolution, and then to the Board of Estimate for approval.

In one instance of DOE inflexibility, CETA gave the Board $60,000 a year plus utilities for an adult automotive center on Atlantic Avenue which could have been purchased for less money over a 5-year period. These leases are often not cost-effective, and each lease should be analyzed to see if purchase would be more reasonable. Furthermore, DOE as the prime sponsor should investigate rental or purchase of facilties in its own name, and then allow contracted programs to use the space, rather than allotting rental money to the contracted programs. This might streamline the cumbersome procedure.

The Adult Program has also stressed the "piggybacking" of programs in one space and feels that this has been successful in alerting parents and students as to the availability of a large variety of programs, and maximum use of equipment. DOE has discouraged this practice, less concerned with the efficient use of space than the use of this space for CETA programs only, and this has been a source of disagreement between the two bureacracies.

Administrative Difficulties:

A brief look at one additional program illustrates administrative difficulties that exist between the Board and DOE: State Vocational Education Discretional Funds for Title IIB vocational education skills training. The Board of Education has one contract with DOE (of 15-20 contracts let). The DOE considers Board of Education programs to be "no better, no worse" than those of the Community Based Organizations, only larger. DOE personnel feel that the Community Based Organizations have the advantage of being able to provide training at locations that DOE feels are important, and they can target specific ethnic groups or neighborhood organizations, reaching people that could not be reached through the schools. A bias exists with some DOE officials against the Board which is further exacerbated by poor administration by Board personnel. Reports due to DOE are "not as timely" as they'd like, including the stipend proposal, quarterly performance reports, and responses to DOE requests for general information. The bottom line is that the CBO's comply with the DOE requirements and the Board does not. If the Board is to receive more than its mandated set-aside, these problems will have to be resolved.

Underspending

FINDING: Although the Board has underspent its YETP allocation in the past, new Dept. of Labor procedures should prevent significant underspending in the future.

In fiscal year 1978-79, the Board underspent its YETP allocation by $800,000. Although there have been many theories as to why this occurred, the Assistant Commissioner for Youth Programs feels it was because the U.S. Department of Labor administered the money in two cycles. All prime sponsors had difficulties spending their monies. Adequate planning could not be done for the second cycle because no one knew how much money was coming. The money is now allocated at one time, which should eliminate this difficulty and it is not expected to happen again. The Department of Employment expects the Board to spend 90% of its allocation, and anything below 80-90% would be cause for a close examination of the program. It is unclear at this time whether the $800,000 will be carried over completely. The carryover would reduce the total amount received next year from the Department of Labor for CETA programs.

Lack of Coordination

FINDING: The Board of Education and the Department of Employment often lack familiarity with one another's programs and procedures.

During the 1979-80 school year, the Department of Employment began a jobs counseling program in the Bronx that has recently been targeted at youths attending the Board of Education's Bronx Dropout Center. It is very likely that the two Bronx sites could have been leased as one unit, had the appropriate personnel been aware of the plans of the other agencies during the planning stages.

Initial contact by the High School Division with DOE highlighted the fact that the Department's Jobs Counseling Center and Board's Dropout Center were targeted to the same population, which resulted in coordinating their locations and getting CETA monies for the dropouts. A connection between two units at the Board, CCOE and the High School Division, was facilitated by their independently contacting the same source for funds, with DOE then putting the groups together by coordinating the dropout monies with the YETP programs already in place.

In another instance, a major budget disagreement was resolved by George Quarles of CCOE. He pointed out that certain budget controls required by DOE already exist in the Board. These requirements, he said, might well apply to community-based organizations, but were superfluous for another city agency. DOE accepted these Board controls as sufficient, and the issue served as a learning experience for both agencies in developing a better understanding of how each organization functions.

YETP Mandate

FINDING: The Board does not apply for more YETP funds than it is guaranteed to receive by law.

The 22% set aside for YETP programs has caused some problems between DOE and the Board. The most damaging of these is that DOE believes that the Board virtually stops writing proposals after the 22% mandated set aside, although it could receive a large amount if it applied for additional funds. Although the high rate of dropouts in New York City leads some in the Department of Employment to believe that the Board has not been successful in reaching dropouts and another unit should be the basis for reaching the target population, others feel that the Board has the best

facilities and the best access to the eligible population, therefore enabling it to be a bigger part of the program. The first group feels the 22% set aside is the most the Board should get. Those who think the Board could do more feel that the Board is hampered by the 22% set aside. They feel the 22% mandate makes the negotiations between the Board and DOE for increased Board productivity ineffective. They believe that an elimination of the mandate could actually result in the Board receiving more money because it would have to actually compete for the funds and run better programs. As a result, what will happen when and if the legislation changes depends on which group has the policy-making position.

There is no reason for the Board not to compete aggressively for YETP funds beyond its 22% mnandated set-aside. Of course, in order to be awarded additional funding, the Board must address the criticisms of the Department of Employment. This is not to imply that the role of community-based programs should be diminished, as they provide services which probably cannot be replaced by the Board. At the present time, not all available YETP funds are being used, although over 90% is spent. If the Board wrote compelling proprosals and improved its performance, it might receive $2 to $2.5 million more.

Linkages Proposal

FINDING: Better coordination is planned for administration, but not for direct services to students.

There is no general consensus at the Department of Employment as to the role or effectiveness of the Board in the CETA programs. Both the Board and DOE have some difficulties in dealing with each other, primarily caused by the massive red tape in both city bureaucracies. A "linkages

proposal,"[24] jointly submitted by DOE, the Board, the State Education Department, and the New York State Employment and Training Council, has been granted, but this is for administrative developments, not for direct additional service to students. The philosophy for the proposal was good: to provide for networks and linkages to allow for the maximum impact of VEA and CETA programs through improved coordination, moving "toward unified approaches in meeting the employability needs of youth." EPP feels that other good proposals can be developed for actual service, such as in the expansion of the Shared Instruction Program in the After School Occupational Skills Program, that can make use of the developing recognition and implementation of "linked" programs. What should be stressed by the Board are programs that provide additional money and additional services for the schools and the students.

Recommendations:

The Board of Education, State Education Department, and Department of Employment have made the necessary steps toward improved coordination of efforts in many ways. During the short course of this study, difficult issues have been dealt with to the satisfaction of all involved personnel.

To further facilitate the relationship between the various intergovernmental units, the Panel recommends the following:

- The Chapter 399 funds should be earmarked for vocational education .
- The Department of Employment should investigate rental or purchase of training facilities and conduct cost analyses of renting space for 5 years compared with purchasing the facility. In addition, the Board should be allowed to "piggyback" programs in CETA-rented space when that space or equipment is not used for CETA programs.

° The Board and DOE should encourage multiple use of space and split duties of administrative staff, because many VEA programs and CETA programs are closely related, in examining how to maximize the impact of programs. This could result in admini strative savings and additional money for direct service.

° Personnel at the Board must comply with the time tables established by DOE for submitting reports, etc.

° The Department of Employment and Board of Education should consult with each other, through involving the superintendents, as to programs targeted in specific boroughs toward youth. In this regard, programs could be coordinated and space leased jointly where appropriate.

° The Board should compete for additional YETP funds by developing proposals for direct service above the 22% set aside. The emphasis should be on the large population it serves, not the perceived limits as to what it can receive.

CHAPTER V

PROGRAMS AND PROGRAMMATIC ISSUES

Tables 3 and 4 categorize types of vocational and occupational programs in the academic, comprehensive and vocational high schools in the City. Those courses which are listed as educational options programs in the high school directory can be seen in Appendix F. Aside from the actual subject offerings, there is a variety of special programs in a number of the high schools. Two of these programs, the Shared Instruction and After School Occupational Skills Programs, are of particular interest in light of the large numbers of students who apply for vocational programs and do not get accepted.

Supplementary Instructional Programs: Shared Instruction

FINDING: The Shared Instruction Program can expand vocational training opportunities for students, but creates certain problems in receiving schools because of lack of central support.

The Shared Instruction Program (SIP) is primarily VEA-funded and in 1979-80 served 2,480 students who travel from their regular schools to vocational high schools to take occupational training courses for two periods every day. Table 6 illustrates the types of occupational clusters in the Shared Instruction Program, the placement in the boroughs, and number of students involved. Its value lies in its use in opening up full vocational programs to students who cannot get the courses in their own school, and is run in 23 schools. SIP is popular at the Central Board and seems to provide a good option for expanding vocational offerings, but there are some problems associated with it.

In the interviews conducted, some of the principals do not like the program for a variety of reasons: equipment maintenance; student attitudes and the need for supportive services; and class size. In addition, the logistics of transporting the students keeps the program relatively small. Often, the program is continued because the Central Board likes the program and it gives a principal the opportunity to offer a young shop teacher a way to increase his or her income. The receiving school is provided with additional teaching units in its funding allocation for the program. The units given to the school are for instruction only, not for any support services. Some principals complained of the lack of control over Shared Instruction Program students, receiving no support from the Board or the sending school to eliminate behavioral problems with individual students. In addition, many of the vocational schools talk of the pride that they instill in their students, the concern for the work ethic, and the respect that students have for the equipment. Although this may be overstated at times, a sufficient number of principals commented on the additional maintenance they felt was required due to carelessness by the Shared Instruction students as a reason for not expanding the program or for eliminating the program entirely in their school.

Having Shared Instruction students in the shops during the day often brings the class size to a much higher level, and some teachers have expressed concern over this size affecting the quality of the course offering for their own students. Lastly, the difficulties in scheduling students for the program, allowing enough time for transportation and having some control over having the students arrive in a timely fashion, creates logistical problems throughout the day.

To compound the organizational difficulties pointed out, the program, which received $232,974 in FY 79 for teachers, supplies, and transportation, has received budget cuts from both tax levy and VEA monies for this academic year, resulting in some overcrowding of extended day classes, cancellation of three new courses for the Spring term, and cancellation of 12 extended day classes resulting in a waiting list of interested students. In the past four years, the program has shrunk from serving 2,747 students in 26 schools for 1976-77, to 2,480 students in 23 schools in 1979-80.

Some high schools are developing their own Shared Instruction with other schools. One such program, funded with VEA money, is being conducted in advertising skills by the New York School of Printing and the High School of Art and Design. Two classes in the technical aspects of printing are being taught to students from Art and Design, at the same time that students from the School of Printing who are determined to have some aesthetic ability, are taking related advertising art courses at Art and Design.

After School Occupational Skills Program

The After School Occupational Skills Program is also VEA-funded, serving 7,413 students in FY 1979 in 30 schools and two alternative sites. A listing of occupational clusters is contained in Table 7. With the person running the Center responsible for recruiting participants, it provides students with occupational skills courses after school for 4 hours a week for 30 weeks, differing from the Shared Program in that it does not provide a full vocational program. The program contains job development assistance, placing 700 students in part-time employment, individual and group guidance services, and field trips to industry. It

is aimed at the disadvantaged students who have reading deficiencies, language handicaps, or who have failed more courses than they have passed. In addition, there is special funding for an Extended After School Occupational Skills Program for those students who are not disadvantaged. Only non-disadvantaged students in vocational schools who are unable to take certain courses in their home schools can use the after school program in their home schools. It is not as strong a vocational program as the Shared program because of the shorter time spent, but is aimed at teaching the students a saleable entry level skill, an opportunity that might not otherwise be available to them. Transportation costs are funded with tax levy monies ($5,225 for 1979-80). This program, now serving 7,413 students, had been serving 9,000-10,000 students a year for the last two years in 35 centers but, like the Shared Instruction Program, has received reduced funding.

Certainly, these two programs can be used to expand the vocational offerings to students in academic or comprehensive schools, and to deal with the problems of students not getting into vocational programs of their choice. Students who are rejected from vocational schools are often unaware of these alternatives which could meet their needs. In fact, these programs might keep discouraged youngsters from dropping out of school. Principals seem generally supportive of these programs, although some stated that the supply money for the program is not adequate. Efforts should be made to provide the principals with sufficient support from the Central Board and the sending schools to make the programs more attractive. In addition, any plans to expand the programs must rely heavily on the information in the borough-wide plans to encourage the exchange of students in more localized areas of the City to reduce the problems of transportation.

EPP supports the expansion of the two programs and feels that this could be facilitated by using the programs as examples in an application of the linkages project.

The 1979-80 plan for YETP funds stated that the Board would submit a proposal for a skills training YETP component, with the Board providing the training facilities and equipment, and YETP providing instruction hours and supplies. For students in schools lacking the capability of providing occupational training, it was indicated that programs are being developed to utilize the resources of the After School Occupational Skills Program and in the Shared Instruction Program. The use of this planned skills component for YETP participants could be a base to determine what percentage of the participants in the Shared Instruction Program and After School Program are CETA-eligible students. Then tax levy money used for teacher allocation, transportation and supplies could be shifted to CETA. Some students who are already in the Shared Instruction and After School Occupational Skills programs may be interested in getting into YETP, and other YETP-eligible students can be steered towards these programs. 30.5% of all high school students are Title I-eligible, and it is conceivable that at least this percentage of students in these programs would be CETA-eligible students.[25] Contact with the Youth Division of the Department of Employment should be made to apply for additional funding from this source, outside of the 22% set aside for YETP. Coordination between CETA and VEA funds could be demonstrated in these two programs.

In providing supplemental occupational and vocational programs, EPP recommends the following:

- An analysis should be made of the use of YETP money to supplement Shared Instruction and After School Occupational Skills Programs. Additional funds should be requested from DOE to provide funding for eligible students in the program. A savings of $83,870 in tax levy dollars could be realized.[26]

- Information regarding supplemental programs should be given to intermediate and Junior High School students at the time they are denied admission to specific vocational programs. Follow-up should be conducted by the school they will attend to insure that these students receive some assistance in getting enrolled in these alternative programs.

- Sender schools must be held responsible for the control over Shared Instruction participants. Students who participate in the Shared Instruction Program need to receive at least one workshop at the sending school to alert them to the responsibilities of participating in the program and stressing some follow-up by the sending school in cooperation with the receiving school when problems arise. The principal of the sending school must assign a person in the administration to be a liaison with the receiving school to facilitate action on individual student problems when needed.

- Additional maintenance costs caused by a heavier use of equipment at the receiving school should be paid for by the Central Shared Instructional Program.

- Transportation difficulties experienced by participants could be minimized by an overall planning effort to place Shared Instruction and After School Occupational Skills Programs thoughout the boroughs. (Receiving schools should recruit for a cluster of academic schools in the borough.) Again, the borough plans developed by CCOE can act as a source for this coordination.

- Efforts should be made to pair academic and vocational schools to decrease the administrative difficulties in Shared Instruction courses, combining the resources of two schools and interest of the administrators. Innovative programs such as that being conducted at the School of Printing and Art and Design, should be used as models for other schools.

Work Experience Programs

Work experience programs are a valuable component of vocational education. Some of the recommendations of the Carnegie Report relate to the work experience concept, suggesting that we "find ways to break up the big, monolithic high school and its deadly weekly routine." [27] Part-time employment can also increase the exposure of local businesses to the high school students. It might help to improve the image of the schools with business, while assisting the students in getting a better perception of what they need to know when they get out into the working world. In addition, work experiences can help to alleviate the problems the Board has in purchasing the most up-to-date equipment or demonstrating the latest techniques.

The need for part-time employment and the fulfilling of this need by the schools is often done in an informal way. Many of the seniors in the vocational schools work in the afternoons, attending the first session of school. Other students have found part-time jobs by themselves or with the assistance of their teachers.

Two of the formal work experience programs that involve the largest number of students are the Cooperative Education Program, funded with a combination of VEA and tax levy money, and the Youth Employment and Training Act Program (YETP) funded by Federal Comprehensive Employment and Training Act funds. In addition, there are other model programs such as Career Bridges and EPIC that will be discussed with recommendations that they be replicated or expanded.

A. Cooperative Education:

COOP Ed is a work experience program, conducted in 83 schools, with about 50% of the participants having alternate weeks of work and school, and 50% spending one half of the day at school and the other at work. Each job is covered by a pair of students, one in school and the alternate on the job, and the program is standardized in each school so that students who share the jobs are well matched.

The 9,475 students in the program for FY 1979 had jobs ranging from office occupations, retailing, health services, practical nursing, crafts, trades, and technical skills. Table 8 lists the occupational clusters for 1978-79. Employers include major commercial firms, small businesses, hospitals and Civil Service agencies, and the students are paid the prevailing wage by the employer. For the alternate week participants, students take double periods of English and social studies and continue their occupational subjects. They receive academic credit for their cooperative work experience, enabling them to earn the high school diploma within the prescribed time. Seventy percent of the participants come from minority groups.

The responsibility for obtaining job openings, placing students in appropriate employment, on-going contact with employers, and liaison between the schools and the business community is with the COOP Ed Office of the Board of Education. The coordinator in each school recruits and screens student enrollees, prepares them for employment, refers them for placement, and provides guidance.

An attendance study of those in the COOP program as compared to other students, showed the following improved attendance rates in COOP

programs: in Manhattan, +14.8%; Bronx, +18.3%; Brooklyn, +14.8%; Queens, +9.2%; and Staten Island, +9.2%.[28] In addition, informal analyses of performance records indicate that COOP students' attitudes towards school and themselves has improved as a result of work experiences. Based on prior records at sample high schools, grades and attendance of the COOP classes were upgraded after participation in the program.

Aside from the high attendance rate and some perceptual changes that are more difficult to measure, students' earnings from unsubsidized wages is over $12 million a year and more than 87% of the graduates, six months after completion of high school, are either working or attending schools. 36.1% of those who had worked in private industry remained on the job after graduation. Among those who worked in civil service, 23.6% remained with the COOP employer.[29] In addition, the program has served to provide some vocational students with valuable on-the-job training. At Eli Whitney Vocational High School, for example, the students are taught basic electronics in the 11th year, and learn how to repair elevators on a COOP program during the 12th year in response to a request by the Private Industry Council to train elevator repair people. It would be impossible for this training to be done in the school itself.

Most criticisms of this program are that students are generally placed in business rather than technical trades and only the better students get into the program. Table 8 illustrates that 3,000 COOP students are placed in the merchandizing and office careers areas. The program has served, however, to get many minority students into large corporations where access might otherwise be very difficult.

B. Youth Employment and Training Program

The Youth Employment and Training Program (YETP) is currently in its second year of operation, and for 1979-80 is serving 2,100 students in 16 high schools. Table 9 lists the participating schools. YETP provides in-school secondary youth with career employment experience and support services. Work clusters for YETP participants are listed in Table 10. The program is targeted to CETA-eligible youngsters in need of assistance, with "special efforts to recruit youth in target categories which are likely to experience the most severe difficulty in completing high school and entering the labor market including, but not limited to, racial and language minorities; economically disadvantaged youth; youth in families on public assistance; youth in foster care, groups homes or wards of the court; youth with previous history of truancy, court involvement or other evidence of potential drop-out status; physically, mentally and emotionally handicapped".[30] The program has the following components: counseling, career employment experience in private and public sector jobs subsidized at 50% by CETA funds for academic credit; and job development, referral and placement. The Board is required to have 60% of all terminations in positive outcomes, of which one half shall be placed in unsubsidized jobs. (Remaining in school is considered a positive termination for Board run programs.) Performance assessments being done on the program indicate that the Board is fulfilling its contract. The program has both alternate week and part-time components.

An assessment of the program done in 1980 reveals the following: participants saw themselves improving in willingness to be trained/instructed; relationship with student workers; ability to get along with or relate to clients or recipients of the services rendered in their jobs; overall

attitude toward work; acceptance of supervision; and following directions. Employers pointed to changes in the youths' self-confidence, curiosity, productivity and attentiveness.[31]

The major problems with both the COOP and YETP programs are relating the job to school training, and closely linking the job experience to the occupational training and academic areas of instruction, particularly in the industrial trades. Additional problems exist with programming students, particularly those who require remedial math and English courses, and in coordinating these programs and other placement services at the school.

Work Experience Program Placement

FINDING: Placement personnel in the two work experience programs often do not coordinate with one another thus depriving students of a full range of work experiences.

Most schools have more than one individual involved with placement. In two of the schools where the principals were interviewed, there was one individual who had overall responsibility for coordination of job placement. Many of the principals interviewed felt that having a variety of people involved in placement provides the maximum creativity in getting students jobs. Others indicated that the plethora of people involved (one school has 7 people doing job placement) causes confusion. Combining some of the functions of the placement coordinators could result in more efficient use of time, a more central source for students to use, and an identified person at the school for business people to contact. The COOP and Youth Employment Training programs could certainly be more coordinated, and the combining of the placement coordinator in those

schools with both programs into one position should be encouraged. Often, the programs are dealing with two different groups of students, as the COOP program is more heavily geared to business-oriented positions rather than shop or more specialized vocational programs. Sometimes, however, the program coordinators are in competition trying to attract the same students into their particular program. In addition, by separating the programs so completely, opportunities for coordinating the work experience in a career ladder type of pattern are lost. Some private sector employers do not consider subsidized public sector employment as adequate work experience. By having students progress from subsidized employment to public sector employment to private sector employment, this would help alleviate this problem for graduating students. In addition, it would provide the students with a variety of experiences.

Model Programs

FINDING: Various excellent programs exist in the schools which should be expanded or replicated.

One model work experience program is the Career Bridges for High School Youth, sponsored by the Aviation Development Council and conducted at August Martin, Beach Channel, and Franklin K. Lane High Schools. Federally-funded through the Office of Education (ESSA), with the Council as the grant recipient, the program is in its third year. For 10 week cycles, students report four days a week to a particular job site and on the fifth day attend seminars at York College in the morning, returning to their home schools in the afternoon. Students have non-paying work experiences, and although course credit is given, they are responsible for making up any additional credits they might need for graduation.

The seminar at York College serves to apprise the students of aspects of the world of work. Students are visited weekly on site by the job developers, and employers participate in workshops with the staff to discuss general problems that arise.

> "Evaluation of the Career Bridges Program itself is a continuous process essential to the improvement and refinement of procedures and goals. It is hoped that employers will contribute to this process by communicating recommendations, criticisms or general thoughts to the placement coordination and/or the program director at any time. Saturday workshops are convened for this specific purpose several times a year. Past employer participants have made significant contributions toward curriculum changes and program revisions".[32]

The program is geared to the more mature high school students, and actually removes them from the school setting for a ten week period. The uniqueness of this program is its strong emphasis on involving the employer, the frequency of on-site visits by the job developers, and the seminar experience at York College dealing with the world of work problems.

A second program is EPIC, Education Through Private Industry Cooperation, co-sponsored by the Economic Development Council of New York City, Inc., and the New York City Alliance of Business. The funds for this pilot program are from CETA Through Youthwork, Inc., and the New York City Department of Employment. It is in its second year, and the goal has been "to determine whether and how economically disadvantaged minority youth can be helped to make a successful transition from the public school system to private sector employment".[33] An evaluation of the first year showed a retention of as many as 39% of the program participants in unsubsidized summer employment. This program is an after school learning experience, with students finding their own jobs with private sector employers in the immediate school and neighboring communities by surveying employers and determining whether these employers would participate in the program, either by hiring students or speaking in the

schools. They work at a particular site for 3 hours a day, four days a week, and the minimum wage received is subsidized by CETA funds. Staff in the school conduct workshops on the fifth day of the week. For the first year, the students found more than enough jobs, and also found 150 employers willing to be classroom speakers, 250 who would be willing to have students visit their place of work, and 100 who were willing to do both.[34] Indications are that the second year schools are experiencing the same positive results.

Both of these programs have been carefully evaluated by the funders, and serve to demonstrate the importance of the work experience for high school students. Most students have never worked before and attitudinal changes were seen in the participants, primarily because of their work experience. In the evaluation survey of EPIC participants, who were economically disadvantaged minority youth, two-thirds indicated that their behavior patterns and attitudes in school had changed because of their experience, and 87% indicated that they had gained greater insight about the kinds of jobs they would like to have in the future. 82% indicated that they would be willing to participate without pay if they could receive school credit for their efforts. The implications the two programs have for the involvement of the private sector are further discussed in Chapter VI.

EPP recommends the following:

- Coordination between the various work experiences should be improved and career ladders in work experiences should be investigated, students progressing from subsidized employment to public sector employment to private sector employment.

- Placement services in the high schools should be streamlined, with all placement requests going through one individual and with more sharing of COOP and YETP placement services by one individual.

- By combining the placement coordinator for COOP with the YETP coordinator, currently funded at 13 schools, a tax levy savings of $53,300 could be realized. This should be encouraged as an example of improved "linkages".

- Every effort should be made to expand the major programs.

- Model programs such as Career Bridges and EPIC should be replicated or expanded to more high schools, and other pilot programs that have not been as successful should be closed.

Equipment

FINDING: Obsolete or broken equipment is a major shortcoming in vocational programs. Better coordination, planning and purchasing could alleviate some equipment problems.

The status of equipment and its importance in the training program is an important issue in assessing the value of vocational training programs. Many private employers say that the schools' dated equipment make the programs less valuable. Although this argument is acknowledged, it is moot in New York City. The school system does not have sufficient resources to update its equipment. What needs to be emphasized, then, is:

- putting highest priority for equipment spending in those fields where the most modern equipment is essential for the students to obtain entry level skills;

- coordination of unused equipment in certain schools with the needs of other schools who do not have equipment;

- careful purchasing to insure that equipment selected can be updated at a reasonable cost when necessary;

- the most efficient utilization of those funds allocated for equipment purchase, repair, and maintenance; and

- increasing work experience to expose students to the most modern equipment.

Programs need to be based in the schools so that the school can build basic skills. By placing students in work study programs, students

can be exposed to the more modern equipment, and the schools can serve as a support system for the students' first exposure to the world of work. Careful purchasing should be done in consultation with experts in the particular field, involving the private and public sector users of particular types of equipment in analyzing the existing facility, planning for uses, and recommending the best alternatives. One example where this consultation saved the Board money was involvement of a public health official in the renovation plans for Tottenville High School's animal care courses. By suggesting methods and materials utilized in the public health sector, the estimates for renovation were brought down from $75,000 to $40,000. Setting priorities for the fields where the most modern equipment is needed also should be done in consultation with the private sector. The professionals in the field have projections regarding equipment they expect to use in the future, and this information should certainly be shared with the schools. In the data processing field, for example, equipment is almost outdated by the time the order is received, and no school could expect to keep current equipment. More important is the ability of any equipment to be modified to receive changes or to provide the students with tranferrable skills. Equipment in the machine trades has not changed as radically and only the larger shops have the modern units. Better utilization of equipment monies requires improvements in the current purchasing process and priority of increasing the utilization of outside funds, set jointly by the City and the Board of Education. In addition, improved coordination of equipment unused in some schools and needed by others could improve the overall availability of equipment to the students. As discussed on page 39,

unused Industrial Arts areas certainly should be coordinated with the Special Education Division. Purchase of new equipment in the more intensive programs with VEA monies might also free up older equipment for the less intensive programs. In talking to the AP at Murry Bergtraum in data processing, he indicated that they needed a larger, faster, in-house computer to deal with the large number of students and the extent of the program. Requests for a new computer were turned down. At the same time, a new machine identical to that already at Bergtraum is being ordered for Gompers to begin a program there as a source for the students in the Bronx to be exposed to the equipment. Coordination of usage could provide Gompers with the unit from Bergtraum, which is certainly adequate, and the purchase of a larger computer for Bergtraum, which has a large number of students in the program.

FINDING: The process for the purchase of equipment is extremely inefficient and costly.

The primary source of funds for equipment is VEA funding which must be expended within a certain period of time. In the current process, the requisition requests must go to the Bureau of Supplies, which does not prioritize these requests to insure their timely purchase. It remains to be seen how this process will be affected by the recent moves by the Board of Education to transfer purchasing responsibilities from the Bureau of Supplies to the City's Department of General Services. Priorities for expenditures should be made by CCOE and followed by whatever agency is responsible for purchasing. In addition, the budget modification process is long, and overestimations for equipment costs which could be freed for auxiliary personnel or other equipment does not become available quickly enough to allow the Board to expend all of its VEA funds. For

example, an overestimation discovered in November may result in the freeing up of the money in May, in part because of a lack of inventory computerization, causing difficulty in finding the accrual, and partly because of the time needed for planning its use and getting approval by fiscal management, the Board, the appropriate State Education occupational unit, the State Education Department, and the City. The current limited computerized system then requires that the money actually show up on the computer before it can be spent, which takes an additional 5-6 weeks. In addition, many vendors refuse to process orders from the Board of Education because of non-payment or slow payment for past orders.

In 1978, EPP conducted a management study of the Bureau of Supplies (BOS)[35], dealing specifically with the purchasing and bidding difficulties at that unit. In the course of this study, it was evident that there have not been major improvements in the Bureau or the process itself to provide for the most effective use of the limited funds. One vocational high school principal stated that the last list of supplies received from BOS contained no vocational equipment, which means that any requests will have to go out to bid. EPP's study of the high school unit allocation formula[36] (1979) pointed out that many principals felt they could get better prices if they were allowed to purchase their own equipment, and EPP recommended that a pilot program be initiated to test this concept. In addition, the report recommended more flexibility for the principal in using his or her units.

All the vocational principals complained of the recent restriction on the use of one teaching unit for supplies. With no supplies, many of the shop teachers cannot teach productively, and adding another teacher rather than getting the required supplies makes little sense. EPP feels

the principals should have the power to make this determination. Another principal stated that he hired a secretary at $17,000 just to deal with the paperwork for ordering supplies, even though his OTPS allotment is only $22,000. The Board must provide for the most cost-effective use of its limited supply funds.

FINDING: Lack of equipment maintenance is a serious problem because of lack of adequate funding, but there are ways to provide for more flexible and effective use of funds.

A second aspect of equipment purchasing is the dependency on necessary capital improvements such as new plumbing and wiring to allow for the installation of new equipment. Currently there is no formal procedure to insure the appropriate coordination of purchasing equipment with state money and installing or repairing that equipment with tax levy dollars. Feasibility studies are done by the Education Facilities Planning Unit, a unit of the Board's Division of School Buildings, to determine what alterations need to be made to install new equipment that has been funded by VEA, particularly since many of the schools where equipment needs to be replaced or programs expanded are the older structures. VEA will only pay for the equipment, not any required improvement. Once it is determined that the necessary alterations can be made to install the equipment, requests are now forwarded to the Bureau of Maintenance, which may be unable to fulfill them. This results in expensive equipment being purchased but not installed for years. Efforts to circumvent the system by having teachers install the equipment, for example, are discouraged because of the legal responsibility of the Board to comply with City Building, Plumbing or Electrical Codes, the Board being unwilling to have any hint of negligence in equipment installation that will be

utilized by students. Nevertheless, it has been done in some instances.

Yet a third aspect of equipment use are the difficulties in maintaining the up-to-date equipment that is in the schools, such as for electrical typewriters, where money is spent in purchasing the equipment but no additional service money is set aside by the Board.

Coordinating the purchase or maintenance of VEA equipment with tax levy dollars involves a new priority within the Board to commit tax levy dollars in order for the vocational programs to utilize those large and expensive pieces of equipment that are available through the Vocational Education Act. Two years ago, the high school allotment for maintenance was eliminated. Since then, the Bureau of Maintenance has been reduced so that it can, in effect, handle-only emergency repairs. In order to provide the necessary funds for installing new equipment, the City must recognize the loss of funds and services that are caused by the Board's necessarily limited allocation to installations. It is impossible to talk realistically about new money for maintenance of equipment, as even EPP has suggested reductions in maintenance to preserve direct services to the students. However, in many cases, lack of maintenance means students being deprived of services. Not only are some major pieces of equipment sitting idle because they cannot be installed or repaired, but the students who could be using that equipment to improve their skills have lost the opportunity.

Not only the shortage of funds but the way they are allotted often results in equipment disrepair. Principals in the schools are limited to $100 purchases or repair orders and are required to have 3 bids to have purchases considered. In one of the major commercial schools, the typewriter maintenance contract expired in April and no new contract was

signed. Special adjustments were made at the Central Board to assist the school, although it should be noted that the April-to-April contract existed because of the Board's original slowness in letting a contract. In another vocational school, the $100 limit has also caused difficulty in its typewriter repair. If 3 typewriters need to be repaired, and the cost for the service call alone is $32.00, the maximum that can be spent on labor and parts is $68.00. If more than that is required to fix the third machine, for example, the repair person would have to make a second trip so as not to exceed the allowable discretionary expenditure. What in fact happens is that the third typewriter remains unrepaired. A similar situation exists with larger equipment. One machine shop has a numerical control machine, which costs approximately $40,000. It has been inoperative for 5 years because it needs a part. The cost of the repairman alone is $100 a day, and the purchase of parts puts the cost above the allowable amount. Again, allowing the principal more flexibility in the amount of OTPS money that can be spent without the approval process would greatly assist in the solution of this problem.

As a result of these problems, various coping mechanisms have been developed to maintain the maximum service to the students. With a reduction in money for maintenance, the problems of keeping and installing equipment become ever more intense, and the methods used to counter these difficulties require more effort on the part of the teachers and administrators, many of whom have been very creative in using an ever-decreasing source of funds. These methods include use of facilities in private industry and in community colleges, reducing the need for Board-owned and maintained equipment.

One program that the Board used to assist in maintenance difficulties is the business machines repair crew at Gompers High School. With students being paid stipends from reimbursable funds, students at Gompers are repairing the typewriters at Dodge High School.

Within the current fiscal restraints, changes can be made to improve the utilization of equipment. EPP recommends the following:

- The $100 discretionary OTPS used by principals should be increased to $500.
- EPP recommended in its 1979 study of the unit allocation formula, a pilot program for giving a principal complete discretion over all his or her OTPS monies. This recommendation is reiterated with the suggestion that vocational high schools be selected for the pilot program.
- The restriction on using one teacher unit for supplies should be lifted so that the principal can have more flexibility in the use of funds for his/her school.
- For those repairs which do not require licensed tradesmen, utilization of student work study programs should be further expanded.
- Equipment purchase should be based on priorities for existing programs, supplementing and updating offerings that are in place and need to be expanded or upgraded.
(also see page 105)
- Priorities should be established for those fields where use of modern equipment is essential for the students to obtain entry level skills.
- Work study programs and trips to businesses be expanded so that students are exposed to the most up-to-date equipment possible
(also see page 105)
- To insure the most careful and cost-effective purchasing of equipment, members of the private and public sector who are users of that type of equipment must be involved in the analysis of the existing facility, planning for the uses of the equipment, and recommending the best alternatives. This responsibility of involving the private sector lies with the Occupational Unit Coordinator at CCOE.
- Members of the private sector should be encouraged to donate maintenance services as well as supplies.(also see page 105)
- The proposed renovations for facilities and minor improvements or alterations should also be reviewed by professionals in the private

or public sector familiar with the particular occupation, and their input should be given to the Educational Facilities Planning Unit of the Board. Facilitation of this can be through CCOE unit heads or the Advisory Council.

Other recommendations rely on a stronger recognition by the City of the importance of funding the Board's capital improvements, repairs, and maintenance needs:

- Current facilities in the vocational schools should be assessed by the Educational Facilities Planning Unit in cooperation with the Planning Unit of CCOE to determine which schools can be upgraded to accept new equipment before the requests are made for VEA-funded equipment.

- With the results of the capital improvements and betterments study, the Board of Education must receive assistance from the City to establish a priority in its budgeting for upgrading of facilities to maximize the equipment available for reimbursable sources. The updating, maintenance and replacement of equipment is of vital importance to the schools' efforts in providing the best possible vocational training, even if this effort is restricted to providing students with the basic skills in the trade.

Follow-Up

FINDING: Follow-up of students completing vocational education programs is lacking.

There is universal agreement that there should be more follow-up of students completing vocational programs to determine the appropriateness of their training. In the past, follow-up of students in occupational programs was done through a limited processing mechanism at Norman Thomas High School, and results were insufficient to support or refute the effectiveness of existing programs. The State Education Department has now mandated that follow-up be conducted with all 12th grade students who complete occupational courses (as defined by the State) 6 months after graduation. This has just recently been completed by CCOE, with responses of over 40%, and can certainly be used as one indication of the success

of the program. Coupled with 1 year and 3 year follow-ups, which CCOE is able to accomplish through new unit records, the data could be of great value. Planned employer follow-up one to two years after graduation will provide the real "acid test," according to the planning unit at CCOE.

Full attention should be given to the complete analysis of the data received, to provide for the fullest utilization of the information in the planning of programs. EPP recommends that the data be used:

- To determine which areas are the most effective in maintaining student employment and further education in the primary or related field.
- To determine which fields do not retain student interest after graduation, where students leave the field completely, and to assess the practicality of continuing these courses.
- To contact employers to determine the effectiveness of the training.
- To contact students to determine their assessment of the training received.
- To break down the data by school and program, giving the administrators and teachers an opportunity to see the placement of graduates in relation to the courses of occupational study.
- To determine how the occupational courses in comprehensive schools which do not meet the actual state criteria of convening 10 periods a week compare to the more intensive courses in maintaining student interest in that field or a related one. This would help in planning for a wider spread of offerings or a concentration on more intensified vocational training.

CHAPTER VI

BEYOND THE HIGH SCHOOLS

Relationships with Community Colleges

FINDING: There are a number of programs that have established relationships with nearby community colleges to utilize their more advanced equipment or courses in vocational areas.

There are a variety of joint high school and college occupational programs. Some involve participation in the high school by college personnel and others have high school students at the community college facilities. Interviews with principals indicated that, not only did these programs allow for a wider exposure to curriculum or equipment, but the programs expose students to the experience of being at a college, allowing them to adjust to the concept of attending further schooling and to increase their confidence in their ability to perform in that environment. The relationship often results with the students being exempted from courses at the college (such as LaGuardia Community College and Norman Thomas High School), and with automatic acceptances. A unique example of an alternative school relating to a community college is Middle College Alternative High School and LaGuardia Community College, which is operated under the joint aegis of the College and the Board of Education, and whose population is those students who have been identified as pre-dropouts by their Junior High School guidance counselors. The program includes internship programs at the Community College: human services, business technology, and liberal arts and sciences. The traditional sequence of high school and college are altered, and students who take college level courses during the high school years are awarded academic

credit for the courses when they enter LaGuardia Community College. 42.5% of the graduates of M.C.A. High School attend La Guardia Community College, and a total of 85% enroll in colleges. The attendance in the program is high: 84.4%. The drop out rate, keeping in mind that the population is made of potential drop-outs, was relatively low, 14.5% for 1978-79. Although this particular program is not readily adaptable to other high schools, coordination of the training curriculum and access to additional equipment or more advanced equipment at local colleges, can be implemented to a greater extent. EPP recommends that:

- The relationships of vocational and comprehensive schools with community colleges be expanded particularly in the occupational areas. Coordination of high schools with appropriate community colleges should be the responsibility of the borough superintendents.

- Demonstration projects should be developed in each borough in 2-3 vocational areas, relating one school program with the community college using some of the ideas from the middle college experience.

Involving potential employers: business and industry

Considering the size and reputation of New York City's business and industrial community, it is disturbing to see how little coordination there is between the potential employers and the school system. There are two benefits to involving the private sector in vocational programs. The first is as advocates, to insure that the ongoing source of workers from the schools receive the best possible education. The current fiscal condition of the City has implanted competition among all of the city's services, who are vying for the limited amount of tax levy dollars. Those programs which serve a cross-section of the general population and the business community are the most likely to receive any increase in dollars that would allow them to maintain their current level of service.

The second role is as experts in the field, to assess programs and equipment, and facilitate the placement of students. The prevailing feeling that schools and the system are for educators only is not productive.

Some cooperation does exist. This section discusses the current role of the private sector in placement and as advisors to various schools. The fields of data processing and machine trades are used to illustrate where this involvement can be improved and expanded.

A. Placement

FINDING: The most consistent involvement of the private sector with the schools is in job placement. Often, however, efforts to contact the schools to fill positions are thwarted by the school system itself.

Recently, the Private Industry Council (PIC) tried to locate 2,000 students to apply for the Summer Youth Employment Program, and was initially not able to find a sufficient number of applicants. Although the program was publicized to the high school principals through a flyer, the response was not sufficient and there was little or no follow-up by anyone at the Board. Although last year the New York State Employment Service distributed 20,000 applications to students they thought would be eligible, no one at the Central Board directed the PIC to this source or another that could reach a large number of students. The employment counselors were finally contacted during the middle of the Transit strike, which reduced the effectiveness of their efforts. Fortunately, an extension was received from the Department of Employment, and the students were found, but no central sources for job placement had been uncovered, and the program was dependent on the continuing efforts of the PIC to find the students rather than any strong force within the Board. Some organizations might not be so persistent, and job opportunities can be lost. Other private

sector employers have had similar difficulties in making placement requests in the schools due to the plethora of programs that exist. Certainly, there should be a central source at each school to receive requests, and a corresponding function at the Central Board to assist in the coordinating of job placement programs where needed. At the least, the various programs should have some mechanism for interrelating at the Central Board. Some existing programs, through the National Alliance of Business and Assocation of Business, Labor, and Education, provide the larger corporations with some mechanism for involvement, primarily through CO-OP Ed and Open Doors, which provides speakers to the schools for career exploration. This does not address the needs to match the small businesses in the City with potential employees from the school system, however. One successful outreach in regard to job placement has been done in the CO-OP Program, where the Board of Realtors has convinced its members to include brochures with rent notices, and where building owners have allowed job developers into a building to solicit positions. Although this has worked with placement, contact with other levels of corporations need to be made to make use of technical expertise in examining curriculum and equipment.

B. Advice and Assistance

FINDING: Many opportunities for utilizing the wealth of expertise and technology available in the city are lost to the school system.

Those administrators at a school who are involving private industry do so out of their own creativity; whether it be to get supplies, have equipment and curriculum reviewed, place students in jobs, or keep teaching personnel updated through industry visits. Most of this takes place in the vocational schools. Certainly, little exists at the Central Board to facilitate these contacts, and great strides need to be made to involve the private sector in the school system.

The Board of Education's structure provides for the formal involvement of the private sector in vocational education through the Advisory Council. The commitment to this mandated council, however, has been minimal, as there is one Executive Secretary to coordinate approximately 50 different commissions, some which are city-wide commissions and some which are particular to a school. Some are active and some are not, apparently due to the amount of time the principal has to devote to his commission, and to the size of the businesses involved in particular commissions. Those industries which are characterized by small businesses seem less likely to be active in an advisory commission because of a lack of time, but some schools have informally consulted with small businesses, having them review curriculum or equipment. Part of this difficulty is in trying to get a consensus from the employers on what the school should do although this may be impossible and, in fact, unnecessary. Smaller businesses cannot train entry level employees, therefore they require skill levels in addition to basic literacy skills. Large companies are more able to provide on-the-job training for graduates having little or no specific skills, and appear to be more concerned with schools providing employees who have basic literacy and math skills.

In a report by the Business Advisory Commission for the Board[37], the Commission highlighted the difficulty they have encountered in implementing their recommendations, both due to the structure of the Commission and the lines of responsibility from the Board of Education to the schools. Functioning as a general body, the Business Advisory Commission has no permanent committees with specific responsibilities, and therefore it

is difficult to provide differentiated and ongoing support to business education. Although the Commission provides consultation and supportive services to the Bureau of Business and Distributive Education, Advisory Committee members feel their recommendations are not given serious consideration by principals. While all members of the private sector indicated a willingness to assist the schools in their programs, their enthusiasm had been dampened by the lack of receptivity on the part of the individual schools. Some of the most successful schools are those that, in exchange of commitment of their own time, have reaped the benefits of industry's interest in their programs.

Involvement of the Superintendents or their staff on the major Commissions might serve to provide these groups with more leverage in program offerings in the schools. Each year, minor programs evolve which connect one or two high schools with the business world. And yet, there is strong evidence that, for every program started, there are an equal number of opportunities that are lost, mostly through inertia at the Central Board of Education. One opportunity to involve a large number of schools was never implemented. In 1979, members of a number of large corporations in the city suggested to the Chancellor that they initiate an "Adopt a School" program, but the idea seems to have gone nowhere.

A strong commitment should be made by the Board of Education to involve the private sector in its programs. In those schools where participation has been strong, programs have been developed to provide trained workers in response to the immediate needs of the business and industrial community. Examples of this can be seen in the development of a legal stenography course at Eli Whitney, with the curriculum devised by the personnel director of a large law firm. The same school is involved

in a program with the Private Industry Council to provide the city with trained elevator repair people, in response to a shortage found by the PIC. This program provides the electrical shop students with on-the-job training in a COOP program.

Local information can be more important than reliance on general labor statistics. The data available from the Department of Labor on openings in various fields is difficult for the schools to deal with, and it is not necessarily applicable to the altering of course offerings. It is acknowledged by the business community that the Bureau of Labor Statistics data are not totally accurate, primarily because they reflect only the numbers of jobs that become available due to growth in an industry and not vacancies due to attrition. More direct links with the existing market must be found.

There are other sources of labor statistics available in the City that should be utilized by the Board. Profiles have been developed of industries and of neighborhoods. At the least, these should be utilized by the COOP and YETP programs to expand their offerings to students wanting more than office experience. There is no question that one of the major needs in New York City is for a strong clerical and office support staff. But this is only one of the needs. Industrial needs must also be recognized to help stop their flight out of the City. The role of the Private Industry Council and the Chamber of Commerce should be increased in discussing job needs with Board personnel in the planning stages. Businesses in the areas around each school could assist in assessing skill and program needs. Again, the borough mini-plans could be put to use in examining the number of small businesses which could use employees from the local schools. Developing commissions which have a particular interest in the students in the school and the vocational training that it offers has been very beneficial although

formal meetings certainly are not required with all the employees. The Central Advisory Council should provide a focal point for city-wide industrial and business involvement in overall needs assessment, curriculum development, and job development, and there should be a formal link between the school commissions and the Central Council.

Private sector companies involved with a school often fill a great need for supplies for use in the vocational schools. For example, the New York School of Printing received approximately $150,000 worth of supplies in donations a year as compared with $16,000 from the Board of Education for OTPS; this results from specific interest in the programs of one particular school by members of industry. Another role they might begin to play is in assisting the schools with their maintenance difficulties.

In establishing contact with the private sector, some of the schools and programs have focused on attracting the executive in the highest possible position. Although administrative vice presidents are providing access to the corporation, the heads of the technical units would be more useful to the schools in assessing programs. Both the placement and the advisory roles can be more closely examined by looking at the data processing and machine trades programs.

Machine Trades

This industry consists primarily of small shops, although some larger businesses have machine shops in them. Industry involvement in the seven program studies varied from experts visiting the schools and examining the equipment on a yearly basis to an informal relationship with visits by the teachers to an individual in the field. Again, the

efforts to involve the private sector are directly related to the personalities of the administrators and individuals running the programs. In this particular field, where all the schools have more requests for jobs than they can fill, and the difficulty is in attracting the students to the field, it is imperative that the industry become a part of a major effort to continue or expand the programs. To do this, the Board must deal with some general reactions of industry to their programs, as found in a study on the machine trades for the Rockefeller Brothers Fund.

> "Many employers have good relationships with specific vocational high schools. However, the Board of Education made several critical decisions which affected the machine trades industry. These include: a)removal of tax levy funds from the evening vocational high schools. (These evening programs were a major source for training machinists. Although the programs were continued with Federal and State funds, industry seemed more aware of the removal of tax levy funds than the continuation of the programs with other funds); b) cutting back machine shop courses in day-time vocational high schools; c) failing to integrate modern equipment and updated curriculum into the machine shop curriculum."[38]

To many people in the industry, the Board has pulled support from the machine trades. In fact, however, shops have been closed because students cannot be recruited. Industry in this field, therefore, should be involved in various ways: career exploration; curriculum review; and on-the-job training for students.

None of the companies contacted had any involvement with curriculum, although some expressed a willingness to assist the schools. As previously stated, the last centrally developed curriculum was done in 1963. Their major contact with the school is in placement for graduates, their perceptions of the programs are associated with a local school, with programs varying greatly from school to school. Little or no effort is made to alert guidance counselors or parents to the positive aspects of this career, and our student survey showed that only 39.2% of those students enrolled in the

shops had ever visited any type of machine shop. The survey also showed the primary influence on selecting the course was friends and relatives (42.7%). The industry should make every effort to expose incoming students to the job sites, encourage part-time employment of those in the programs to make the best use of this influence, and expand the possibilities of the course becoming more popular through word of mouth among students. In addition, by incorporating more part-time employment into these programs, the schools would be able to reduce the criticism of some in the industry that their students trained on outdated equipment. Students are able to see what skills they lack when they go out on a job, use more advanced equipment, and return to school and request and receive assistance in those areas where they feel the weakest.

Data Processing

The field of data processing is much more popular with the students than machine trades programs and courses are located in both the vocational and academic-comprehensive high schools. The programs examined were the six schools that have in-house computers. (See page 7)

With the large numbers of businesses in New York City which employ data processing people at all levels, the schools would seem to have a bevy of opportunities for involving industry in curriculum and equipment review, updating teachers skills and placing students in part-time employment. This was not found to be the case.

The Employer's Views on Hiring and Training, a report by the Labor Market Information Network, a task force of data processing professionals, stated that the data processing curriculum should provide a broad exposure to types and generations of hardware, stress actual work experience,

and provide an introduction to job control and language.

> "In those progams that profess to train students for key entry jobs, the employers found the training inadequate and the equipment obsolete. Particularly lacking in what these courses provide is, in the employers' view, practical experience, the equivalent of working at a job for eight hours a day in a business environment." 39

Our examination of the programs found an emphasis on the more academic aspects of data processing. The schools are unable to provide sufficient hands-on experience for those seeking entry level skills, primarily due to a lack of equipment. There were a number of students involved in work study programs but those programs that provide for this work experience component are sorely underutilizing the opportunities that these jobs and contacts provide. First, those schools which place students in training positions in large companies using data processing equipment often place their best students in positions that could be entries for non-college bound students. For example, a student who wants to be a programmer may be placed at Dun and Bradstreet and, while the experience has been good, he or she is not interested in an entry level position that the experience is appropriate to. The weaker student, who wants to get into operations or keypunching, may be given a job within the school itself.

In addition, the schools have shown a basic reluctance to request involvement of the private employers, feeling this would be an imposition, failing to see the company perspective of needing trained entry level personnel. From the interviews conducted in this field, reluctance is not justified, as all asked stated a willingness to help the schools improve their programs. The schools should keep in mind the appropriate level of contact, however. The technological director is of the greatest

value in reviewing curriculum and assessing programs. One AP said his school had contact with a major employer, but the head of the computer program indicated he was never contacted and had, in fact, asked the school for feedback on the students and had not received it. Obviously, the school contact was at a higher level aimed more at public relations than at actual industry involvement.

In another instance, the school expressed reluctance to give the investigator its contact at a major bank in a work experience program and, in fact, indicated that school contact with the employer was kept to a minimum. After contacting the person through the appropriate program channels, it was discovered that the individual had never been asked to review curriculum or programs at the feeder school. In fact, the AP of the business department, who was trying to develop a strong curriculum in data processing entry level skills, had no contact with this individual at all, even though a few of her students were a part of a work experience at the bank. The professional was very interested in the idea of having input into curriculum and, in fact, had developed training programs for individuals within his organization. What was a case of protecting the source of a job experience from too much "bother" by the school is, in fact, resulting in a missed opportunity to have the valuable input of an interested expert in the field. Those individuals involved in work study programs want to be involved and show this desire by having students at their companies. The schools should make a greater effort to maximize this involvement.

One last note on the insensitivity of the schools to the feelings of the large portion of the private and public sector involved in work experience programs is the lack of feedback to these individuals.

Supervisors who take the time to train students become interested in the effect of the training on the students. At a Career Bridges workshop which provides as much, if not more, contact with employers than any other program, one participant in the health profession requested that more information on the effect of the training be provided to the supervisor so that the program could be justified to the organization on the whole. In this particular instance, a student who wanted to become a doctor had been assigned to their program. As a result, he had made contact with a doctor who wrote him strong recommendations, which, along with his experience in the program and overall qualifications, resulted in a very large scholarship ($21,000) to a State University for pre med. The employer represented was ecs[illegible] and said it was worth coming just to hear that. Although in this case it was not in a vocational field, the same is true for all fields. If the private sector begins to feel as if it is providing some incentive, some assistance to individual students, EPP believes it will take an even larger role. At the same time, private employers must give feedback to the educational system so that the on-site programs can be improved where needed, and the value of the experience could be assessed by the schools.

To more fully utilize the private sector in the vocational and occupational programs, EPP recommends the following:

- A priority to involve the private sector in educational issues must be established at the highest levels at the Board of Education.
- The High School Division should assign the responsibility for receiving centralized placement requests, particularly for large programs, to one individual in their present organization.
- Individual placement contacts should be established at each high school, with a number and name listed in the high school directory, and circulated to the major industry and business organizations, employment agencies, and media outlets.

- Assessments should be made of the types of businesses surrounding each school with the goal being to establish interest on the part of the business community in the school, its program, and its students. Often, as shown in the EPIC project, the students are the best link to stimulate the private sector involvement.

- Stronger coordination between the Advisory Council and the superintendents should be established, through representation by staff of the superintendents on the Advisory Council.

- Suggestions of the Advisory committees which are rejected by the high schools, should be assessed by the Division of High Schools and CCOE.

- Contact with the local industries and advisory commissions should include an exploration of companies donating maintenance support to the schools for their vocational equipment. (See Chapter V)

- The Private Industry Council and Chamber of Commerce should assist the Board in assessing the needs of the local business community in the different areas of the city to be utilized in the planning of occupational course offerings.

- In those industries, such as the machine trades, where student interest is low, career exploration opportunities should be expanded. Visits to the companies by guidance counselors, parents and students should be increased to change the prevailing misconception about various blue collar trades.

- Industry representatives should be utilized in curriculum design and staff development, particularly those individuals who have been involved in work experience programs or who have a vested interest in hiring high school graduates.

- Those employers involved in work experience programs must get feedback from the schools as to the effect of the program on the students, and, at the same time, provide the schools with information on how to improve on-site programs for the students.

- Industry should be a part of the Board's setting equipment priorities in those fields which require the most updated equipment to provide students with entry level skills. (Also see page 89.)

- The funding of training and insurance costs of having students work on heavy equipment should be investigated by industry representatives.

- Work study programs and trips to businesses should be expanded so that students are exposed to the most up-to-date equipment possible (Also see page 82.)

- To insure the most careful and cost-effective purchasing of equipment, members of the private and public sector who are users of that type of equipment must be involved in the analysis of the

existing facility, planning for the uses of the equipment, and recommending the best alternatives. This responsibility of involving the private sector lies with the Occupational Unit Coordinator at CCOE. (Also see pages 89-90.)

- The proposed renovations for facilities and minor improvements should also be reviewed by professionals in the private or public sector familiar with the particular occupation, and their input should be given to the Educational Facilities Planning Unit of the Board. Facilitation of this can be through CCOE unit heads or the Advisory Council.

CHAPTER VII

CONCLUSION

There is no doubt that educators are increasingly recognizing the value of vocational education. Two significant actions at the New York City Board of Education indicate a new commitment to such training -- the elevation of the Center for Career and Occupational Education to divisional status, and the placement of larger numbers of occupational courses in "comprehensive" high schools. Like the Board, the EPP is also hopeful that expanding vocational programs to serve the thousands of children who are currently being rejected each year will provide new impetus for teenagers to stay in school.

The danger now lies in the hasty implementation of new programs without planning and without addressing the need to shore up the courses' contents. Lack of careful planning will again result in administrative waste and duplication, the erratic placement of funds and programs without reference to student and market needs, and the lack of coordinated services to guide students into available and appropriate programs. Random dispersion of funds and programs produce graduates inadequately prepared for the working world. This serves neither the students, the employers, nor the city's future.

Increased involvement of the private sector can serve both the long range and short range goals suggested in this report. It need not take five years to adapt curricula to changing labor market demands. Work experience progams can be implemented quickly to supplement inadequate equipment or instructors who are not trained in the latest technologies. In the long run, such cooperative ventures can infuse into the schools new resources in curriculum, equipment, instructors, and public support for the educational system.

Innovative approaches also can supplement scarce resources. More flexible hiring standards might compensate for the lower salaries the Board can offer. More centralized collection and distribution of city-wide information on course offerings may alleviate the shortage of guidance counselors. Use of students for Board tasks such as maintenance, data processing, food preparation, etc. could give students needed practical experience and save money, too. Furthermore, if the deficiencies in the zoned high schools are addressed, the overwhelming demand for vocational schools might diminish.

While the EPP would like to see a timely response to the myriad problems encountered by students seeking job preparation in the public high schools, we warn against hastily devised cosmetic solutions that are not based on careful planning and coordination of services. In the expectation that plans for improvement of the system will continue at the Board of Education, we will monitor the process to ensure the best possible outcome for children.

FOOTNOTES

1 Summary Report for the New York City Department on Youth Employment Statistics, prepared by Henrietta DeVere, 1979, p.2

2 Carnegie Council on Policy Studies in Higher Education -- Giving Youth a Better Chance, Jossey-Bass Publishers, San Francisco, 1979, p. 2-3

3 The Bureau of Educational Statistics, New York City Board of Education.

4 Studies done in the past include: "A Plan for a Comprehensive Occupational Education System in New York City - Research and Experimentation in a Career Development Center, 1977," CCOE; "Vocational School Industry Relationships: An Informal Review," 1978, The Association of Business, Labor and Education; "A Report by the Chancellor's Task Force on Occupational Education," 1976; "Needed Educational Reform for our High Schools," November 1974, United Federation of Teachers; "A Comprehensive High School Education for New York City Students," 1974, Vocational High School Principals Association and the Office of Career Education; "Performance Audit of Vocational Education in New York City, 1978," Office of the City Comptroller; and an internal report on the structure of vocational education at the Board, 1979, Office of the Chancellor, prepared by Muriel Ollivieri.

5 The classes in which these surveys were distributed were determined by each high school principal. For the data processing survey, 163 students participated. 143 participated in the machine trades survey.

6 Interface, "Case Studies of Two Industries -- The Machine Trades and Banking," June 11, 1979, prepared by Walter Armstrong.

7 Bureau of Labor Statistics, The Job Future in New York - Northeastern New Jersey." (New York: U.S. Dept. of Labor, Feb. 1979), p. 25.

8 These are funds allocated to Boards of Cooperative Education Services to provide vocational and special education to students from many combined districts.

9 This information was given by the Division of Special Education. Although there are only 21 foramlly labeled vocational high schools, Norman Thomas and Murray Bergtraum are often considered in this group, for a total of 23.

10 Directory of Guidance Personnel, 1978-79. BEVG.

11 This is the consensus of the principals of vocational and comprehensive schools surveyed for this study.

12 Career Education Assessment Services, Spring 1979.

13 Educational Planning Institute, Part Time Employment Study, as quoted in The New York Times, May 6, 1979. Article by Lee A. Daniels.

14 Carnegie Council, p. 14.

[15] The Division of High Schools: Report on College Applications and Scholarships -- Class of June 1979.

[16] See Footnote 5.

[17] Internal memo from the Center for Career and Occupational Education, FY 80 VEA Programs.

[18] March 7, 1980. Memorandum from Nathan Quinones to the Chancellor re: Development of Career Education Programs, Selected New York High Schools. These schools are: Martin Luther King Jr., Benjamin Franklin, Andrew Jackson, James Monroe, De Witt Clinton, Samuel J. Tilden, Prospect Heights, Morris, Samuel Gompers Vocational, Thomas Jefferson, Bay Ridge, and Eastern District High Schools.

[19] Board of Education Budget Monthly Financial Status Report, May 1980.

[20] Interview with Roberto Albertorio, Assistant Commissioner for Youth, New York City Department of Employment.

[21] Estimate by the Director of CCOE's Program Management and Operation Unit.

[22] Directory of Public High Schools, p. 3.

[23] "Temporary per diem certification" is a 6 month certificate for those teachers who have the minimum requirement for licenses. It can be renewed. The person is supposed to take the next regular license exam. (Board of Examiners).

[24] "Linkages for New York City" is a proposal submitted by the Department of Employment, CCOE, the New York State Employment and Training Council, and New York State Education Department under the Vocational Education-CETA Linkages Youth Demonstration Project. It was funded at a level of $192,000 by the U.S. Office of Education and U.S. Department of Labor.

[25] Basically, the same criteria is used for YETP as for Tital I students. The Bureau of Educational Statistics estimates that 30.5% of all high school students are Title I eligible.

[26] This savings represents 36% of the tax levy figure for the Shared Instruction Program and the After School Occupational Skills Programs. 36% of the students represents the Title I and Special Education students that are likely to be in these programs.

[27] Carnegie Council, p. 23, 24.

[28] Board of Education of the City of New York; Office of Cooperative Education: "Comparison of Attendance: Regular Course Students vs. Cooperative Education Program Students," p. 1-4.

[29] New York City Board of Education, Cooperative Education Bureau -- "Six Month Follow-Up study of June 1978 Graduates of the Cooperative Education Program.", p. 8.

[30] Narrative Description of the In-School Youth Employment and Training Program to be carried out Under Agreement Between the City of New York (Department of Employment) and the New York City Board of Education Under the Comprehensive Employment and Training Act (CETA) Youth Employment and Training Program (YETP), October 1, 1979 - September 30, 1980, p. 4

[31] Policy Studies in Education -- "Evaluation Report, Youth Employment and Training Program, CCOE New York City Board of Education," executive summary, p. 3 and 5.

[32] Aviation Development Council, Career Bridges Program: "Handbook for Employers," p. 4.

[33] Greenleigh Associates, Inc: "The EPIC Program: Education Through Private Industry Cooperation: An Executive Summary of Outcomes and Consequences," p. 1

[34] Ibid., p. 3.

[35] Educational Priorities Panel: "Bidding and Purchasing: A Management Study of the Bureau of Pupil Transportation, Bureau of Supplies, and the Office of School Food Services." May 31, 1978. Prepared by Allan Tumolillo, Robin Willner, and Pat Konechi.

[36] Educational Priorities Panel, "Allocation of Tax Levy Funds to New York City High Schools," May 1, 1979. Prepared by Robin Willner and Clare Comiskey.

[37] This report was prepared by Danella Schiffer of Citibank under the auspices of the Economic Development Council, June 14, 1976.

[38] Interface, "Case Study of Two Industries," p. 18-19.

[39] Labor Market Information Network, "Employers' Views on Hiring and Training", 1978. Prepared by Edith F. Lynton, p. 59.

TABLE 1

Utilization of Vocational High Schools, 1978-79

High School	Percent Utilization
Art and Design	119.0
Chelsea	117.0
Fashion Industries	110.0
Mabel Dean Bacon	125.0
Manhattan Voc-Tech	103.0
New York School of Printing	119.0
Alfred E. Smith	112.0
Grace Dodge	122.0
Jane Addams	125.0
Samuel Gompers	68.0
Alexander Hamilton	95.0
Automotive	135.0
East New York	135.0
Eli Whitney	127.0
George Westinghouse	131.0
William E. Grady	121.0
William H. Maxwell	182.0
Aviation	140.0
Queens	144.0
Thomas A. Edison	141.0
Ralph McKee	104.0

TABLE 2

Center for Career and Occupational Education - Funding FY 80

Vocational Education Act		
FY 80	14,940,000	*
FY 79 Carryover	2,470,000	
	17,410,000	
Gifted and Talented (VEA and State Government)	25,000	
Youth Incentive and Entitlement (CETA)	112,000	
Youth Employment Training Program (CETA)	5,250,000	
Youth Employment Demonstration/In-School (Special Ed) (CETA)	160,000	
Youth Conservation	20,000	
Elementary School I.A. Publishing Act	45,000	
Youth Empoloyment Program (CETA)	39,000	
Adult Basic Education/Welfare Education Program	4,810,000	
Indo-Chinese Refugee	260,000	
Manpower (CETA)	2,600,000	
CETA - RIKERS	111,000	
LESA	460,000	
High School Equivalency Consortium	860,000	
New York State Mental Hygiene	112,000	
New York State Civil Service	12,000	
YES Bronx Carryover (CETA demonstration)	120,000	
Private Union Grants	approximately 160,000	
Tax Levy	206,000	**
TOTAL	$ 32,772,000	

(Information for this chart is from 11/7/79 CCOE document)

* Includes approximately $890,000 for CO-OP and $350,000 for Shared Instruction Program

** The City Budget has this figure at $217,604

TABLE 3

Programs Funded by the Vocational Education Act, 1978-79
Directly Involving Students *

Proposal	# Students Involved
Home Economics Occupational Education	2,520
Shared Instruction Program	1,800
Medical Laboratory Assisting	50
Supportive Services for Practical Nursing	600
Interactive Data Processing	500
Shared Time Instruction and Work Experience in Multimedia Production	32
Agricultural Career Ed: Oceanography, Animal Care and Conservation	600
Agricultural Career Ed: Central Coordination, Ornamental Horticulture	1,975
Business and Data Processing Occupations	1,780
Extended After School Skills Program	600
Occupational Programs in Interior Architecture and Design	40
Occupational Education Support Team	15,000
Business/Office Skills	9,000
Pre-Employment Program (Out-of-School-Youth)	9,000
Related Instruction-Apprenticeship Training	3,000
Health Occupations/Health Assistant	355
Secondary Education Through Health	60
Medical Assisting	125
Hotel-Motel Hospitality Program	150
Business Office and Distribution: Occupations for Disadvantaged Youth	17,180

Proposal	# of Students Involved
Correlated Small Business Trade Operation Program	60
JFK High School Voluntary Work Experience Program	200
Recreational Occupations Training	135
Trade and Technical Program for High School Students	1,282
Trade and Technical Skills Training for Disadvantaged Youth	968
Extended Trade and Technical Programs for Disadvantaged Youth	846
Bronx Career And Occupational Services Center	7,500
Work Experience and Job Development Center (Martin Luther King High School)	100
Metropolitan Consortium for Pre-Engineering Ed	280
Simulated Legal Office Laboratory	120
A Secondary School Program in Food Preparation for the Elderly	100
Training in Occupations for Limited English-Speaking Secondary Students	300
BRAVO (Bilingual Recruitment and Vocational Opportunities)	60
Skills Programs for High School Students of Limited English-Speaking Ability	72
City-wide Integration of the Handicapped in Vocational Training	400 F/T 400 P/T
BEPH High School Career Cluster	900
Work Experience Umbrella for the Handicapped	60
Orientation and Work Experience Training for Secondary Handicapped Students	450
VOCA-OTC ("Vocational Off-Campus Activities in Occupational Training Centers)	150

Proposal	# of Students Involved
ANIBIC Job Skills Training Program	50
Horticulture and Clerical Training in the Bronx Region	600
Cooperative Education	9,000
Vocational Work-Study Program	260
Support Services in Occupational Guidance for Selected Secondary Schools	5,000
High School College Continuum	3,300
Enterprise/Experience	4,680
After School Occupational Skills Program, Guidance Component	125
Metropolitan Educational Laboratory Career Information System	20,000
Occupational Data Processing Center	300,000
Alternative Occupational Facilities	125
Special Programs for the Disadvantaged	
After School Occupational Skills Program	6,000
On-Site Child Care Training	80
Human Services Internships	200
Consumer and Homemaking Programs	27,120

*Taken from the Summaries of Funded Programs, 1978-79. Vocational Education Act, CCOE.

TABLE 4

Schools Offering Programs 10 Periods a Week
Fall, 1979, with Tax Levy Dollars*

Bronx	
Stevenson:	automotives, graphic arts, metal machines, metal work, wood construction, child care, sewing
Truman:	foods, carpentry
A.E. Smith Voc:	automotives, carpentry, climate control, plumbing, architectural drafting
Dodge Voc:	distributive ed/bookkeeping, shorthand, photography, cosmetology, nursery, health careers
Lehman:	shorthand, printing, drafting, woodwork, automotives, heating and air conditioning
Gompers Voc:	electronics, exploratory, data processing
Jane Addams Voc:	nursing, cosmetology, secretarial
Brooklyn	
Automotive Voc:	exploratory, machine shops, automotive
Brooklyn Tech:	electronics, aero design, structural design, building construction
Clara Barton:	health careers
Maxwell Voc:	health careers, accounting/stenography/typing, cosmetology, fashion careers
Westinghouse Voc:	exploratory, electrical installation, electrical servicing, electro-mechanical drafting, technical electricity, computer programs, computer technical laboratory, communications lab, TV studio lab, office machine repair, dental lab, optical mechanical, jewelry, clock and watch, cabinet making
Whitney Voc:	exploratory, appliance repair, business machine repair, cosmetology, cabinet making, electrical installation, fashion careers, radio mechanics, health careers, upholstery

Hamilton Voc:	drafting, carpentry, electricity, business machine repair, sheet metal, machine shop, printing, technical shop, exploratory
Thomas Jefferson:	catering, child care
Grady Voc:	exploratory, technical electronics, automotives, appliance repair, radio-TV, electrical installation, woodworking, machine shop
East New York Voc:	exploratory, mechanical drawing, aviation, machine shop, electrical installation, woodworking/carpentry
F.K. Lane:	steno transcription
Wingate:	auto repair, photo offset
Madison:	office, etc. (ed ops)
John Jay:	machine shop, automotives
S. J. Hale:	cosmetology (ed ops), business ed
South Shore:	business ed, woodworking

Manhattan

Murry Bergtraum:	business (ed ops)
Printing Voc:	printing, journalism
Park West:	auto (ed ops), maritime trades, food
Washington Irving:	home economics, nursing (ed ops)
Stuyvesant:	mechanical drawing
Norman Thomas:	distributive ed/secretarial (ed ops), accounting and data processing (ed ops)
Art & Design Voc:	commercial art, photography
C.E. Hughes:	business ed, hotel/motel/food service, home economics (child care), industrial arts: technical electronics
Chelsea Voc:	exploratory shops, electricity, radio, woodworking
Fashion Industries Vocational:	fashion careers exploratory, fashion design, production technology, jewelry design, men's clothing, fashion merchandising, textile design, fur operating, photography, interior decorating, illustration, fashion art

LaGuardia - Music & Art:	fine arts
Mabel Dean Bacon Voc:	business ed, dental office assisting, cosmetology, health careers
Manhattan Voc:	machine shops, carpentry, appliance repair, drafting

Queens

August Martin:	business ed (ed ops), avionics
Aviation Voc:	exploratory, aviation
Beach Channel:	steno, shop career ed
Newtown:	drafting
Jamaica:	mechanical drawing, health
John Adams:	medical technician
Bowne:	steno, agriculture, horticulture, animal care
LIC:	steno, auto shop
Van Buren:	auto, health assistant, conservation, horticulture
Bryant:	secretarial
Queens Voc:	cosmetology, nursing, lab techniques, exploratory, automotive, radio mechanics, electrical installation, machine shops, plumbing
Edison Voc:	related technical, building trades, metal trades

Staten Island

McKee Voc:	shop/building, shop/metal, exploratory, technical
Tottenville:	fashion, auto, health
Curtis:	nursing

* Taken from the High School Organizational Report, Part 1-B, September 1979

TABLE 5

Tax Levy Teacher Time in Vocational Schools*
Fall, 1979

High School	Total Units for Instruction and Support	Units Spent in Courses Meeting 10 Times a Week	Percent of Teacher Time in Courses Meeting 10 Times a Week
Art and Design	99.33	42.4	42.7
Chelsea	47.61	19.4	40.7
Fashion Iddustries	101.09	37.6	37.2
Mabel Dean Bacon	53.14	19.8	37.3
Manhattan Voc-Tech	54.91	25.6	46.6
New York School of Printing	70.74	35.0	49.5
Alfred E. Smith	79.84	31.6	39.6
Grace Dodge	80.79	28.2	34.9
Jane Addams	61.73	13.8	22.4
Samuel Gompers	43.22	21.8	50.4
Alexauder Hamilton	57.24	21.0	36.7
Automotive	71.19	34.4	48.3
East New York	69.79	32.0	45.9
Eli Whitney	88.00	26.2	29.8
George Westinghouse	96.51	43.4	45.0
William E. Grady	87.11	37.4	42.9
William H. Maxwell	70.19	17.2	24.5
Aviation	125.72	69.4	55.2
Queens Voc-Tech	57.30	25.0	43.6
Thoams A. Edison	103.96	40.8	39.2
Ralph McKee	53.09	23.4	44.1
TOTALS	1572.50	654.4	41.0

* Taken from the High School Organizational Report, Part 1-B, September, 1979.

TABLE 6
SHARED INSTRUCTION PROGRAM (SIP)*

Occupational Program / Business	Boro**/Schools	Total Pupils
Data Processing		
Data Processing	M6 Acad./Comp.	203
	Q12 Acad./Comp.	35
General office/ clerical/typing	M10 Acad./Comp.	44
	K22 Acad./Comp.	20
	R4 Acad./Comp. 1 vocational	7 2
Secretarial, steno	K23 Acad./Comp.	11
Health Careers		
Medical Lab Assisting	1K	4
Home Economics		
Child Care Services	1K	5
Trade Industry		
Auto: Auto Body	1K, 1Q, 1R	46
Auto: Auto Mechanics	1X, 2K, 1R, 1Q	236
Aviation: Aviation Mechanics	1K, 1Q	57
Bldg.Const: Cabinet Making	1K, 1Q	36
Bldg. Const: Plumbing	1R	2
Bldg/Const.:Woodworking	1M, 1K, 1R	4
Cosmetology	1M, 2X, 2K, 1Q, 1R	251
Dental Lab Processing	1K	3
Electricity/Electronics Inst. And Prod.	1X, 3K, 1R, 1Q	120

* From Table III.1 Secondary Level Occupational Education Programs -- Unduplicated Registers and Estimated Costs, October 31, 1978.

** (M) Manhattan
(Q) Queens
(K) Brooklyn
(X) Bronx
(R) Richmond (Staten Island)

Business	Boro**/Schools	Total Pupils
Electricity/Electronics: Radio, TV Repair	1M	3
Electro-Mecn:Appl/Equip. Repair	1M	1
Fashion: Women's Apparel Mfg.	1X, 1K	30
Mech./Metal Machine Shop Practice	1M, 1Q, 1R	31
Optical Mech.	1K	1
Printing Trades	1R	6
Drafting/Drawing: Architectural	1K	3
Drafting/Drawing: Electro-Mech.	2K	4
Elect'y/onics: Communication	1K	24
Elect'y/onics: Computer tech.	1K	9

TABLE 7

After School Occupational Skills Program (ASOSP)*
Occupational Clusters

	# ASOSP Sites by Borough **	Year-round Enrollments (incl. summer)
Agriculture		
Horticulture	1Q	18
Business and Distributive Education		
Typing	4M, 6X, 8K, 4Q, 1R	1579
Business/Office Machines	4M, 4X, 3K	548
Key Punch, Data Processing, Computer Programming	2M, 2X, 1K, 1Q	427
Medical Typing	1Q, 1K	48
Retail Sales	2X, 1K, 1M	170
Office Management and Skills	2M, 2X, 1Q, 1R	202
Bookkeeping, Speed-writing and Steno	3K, 1Q, 1R, 1X	291
Travel and Tourism	2K, 1M	122
Health		
Medical Office Practice	1M, 3K, 1X	272
Medical Labs Tech	2K, 1Q	117
Dental Lab Processing	1K	48
Nursing Skills	1M, 2K, 2Q	164

Trade and Industry

Carpentry/Woodworking	3K, 2Q	186
Automotive Trades	1K, 2X, 3Q, 1R	655
Architectural and Mechanical Drawing	2K	87
Cosmetology	3K, 1X	241
Graphic Arts/In-Plant Printing	2Q, 1K, 1R, 1X	195
Aircraft Trades	1Q	224
Photography	1M, 1K, 1Q, 1X	298
Commercial Art	1M	106
Tailor & Dressmaking	3K, 1X, 1Q	153
Marine Technology	1Q	88
Mass Media/TV Production	1R, 1K	52
Restaurant/Food Trades	1M, 1K	102
Small Engine Repair	1Q, 1R, 1K	135
Electrical Trades	1X, 1Q, 2K	151
Metal & Machine Shop	1K, 1Q	33
Set Design and Stagecraft	2Q	43
Art Careers	2M	658
ASOSP TOTAL		7413 (summer: 1569)

* Table III.3, After School Occupational Skills Program (ASOSP), October 31, 1978. Comprehensive Annual Program Plan, Occupational Education, 1980, CCOE.

** (M) Manhattan
(K) Brooklyn
(X) Bronx
(R) Richmond (Staten Island)
(Q) Queens

TABLE 8

Cooperative Education Program*

Occupational Cluster	Number of Schools/Boro **	October 31, 1978 COOP Enrollments
Agriculture		
Horticulture, Landscaping & Gardening	2Q, 1X, 1K, 1M, 2R	69
Park Maintenance	3M, 2K, 2R, 1Q	14
Business		
Merchandising	41 schools	996
Office Careers	34 schools	2004
Health Careers		
Diet Aides	3M, 1X, 1K, 1R	22
Laboratory Helper	3Q, 3M, 2X, 3K, 1R	18
Medical Office Asst.	12K, 4Q, 5M, 3X, 2R	170
Nurse's Aide	2Q, 8K, 3X, 2M, 3R	159
Ward Aides	2Q, 3X, 4K, 2M	78
Trade and Industrial		
Airline	1Q	2
Apparel Trades	10K, 7M, 2X, 2Q, 3R	145
Automotive Trades	7K,3R, 5Q, 2M, 2X	142
Cabinet Making/ Woodfinishing	7K, 2X, 2Q, 1M	26
Construction	2X, 6K, 3Q, 2M, 1R	45
Cosmetology	2K	18
Electrical Trades	5K, 1R, 1X, 2Q, 1M	45
Food Trades	20K, 12Q, 10X, 8M, 5R	964
Graphic Arts	1K, 4M, 1Q, 1R	74

Occupational Cluster	Number of Schools/Boro **	October 31, 1978 COOP Enrollments
Jewelry & Office Machine Repairs	1K, 2M, 1R	25
Machine Shop	1X, 2M, 1Q, 1K	12
Optical Workers	1M, 1K	6

* Table III.2, Comprehensive Annual Program Plan, 1980, CCOE.

** (M) Manhattan
(Q) Queens
(K) Brooklyn
(X) Bronx
(R) Richmond (Staten Island)

TABLE 9

YETP PROGRAMS*
Participating High Schools by Category

TARGET HIGH SCHOOLS	Boro
DeWitt Clinton High School	Bronx
James Monroe High School	Bronx
Jane Addams High School	Bronx
Morris High School	Bronx
Theodore Roosevelt High School	Bronx
William Taft High School	Bronx
Benjamin Franklin High School	Manhattan
Charles E. Hughs High School	Manhattan
George Washington High School	Manhattan
Julia Richman High School	Manhattan
Eastern District High School	Brooklyn
Erasmus Hall High School	Brooklyn
George Wingate High School	Brooklyn
Curtis High School	Staten Island
Port Richmond High School	Staten Island
William C. Bryant High School	Queens
SCHOOLS WITH SPECIAL PROGRAMS**	
Alfred E. Smith Vocational High School	Bronx
Walton High School	Bronx
Washington Irving High School	Manhattan
Boys & Girls High School	Brooklyn

* From Narrative Description of the In-School Youth Employment and Training Program, October 1, 1979 -- September 30, 1980

** These programs relate to specific occupational/vocational training programs taking place in the schools, such as the Housing Rehabilitation Programs at Smith and Westinghouse.

Eli Whitney High School	Brooklyn
George Westinghouse Vocational High School	Brooklyn
John Jay High School	Brooklyn
Sarah J. Hale High School	Brooklyn
William H. Maxwell Vocational High School	Brooklyn
Alexander Hamilton Vocational High School	Brooklyn
East New York Vocational High School	Brooklyn
Andrew Jackson High School	Queens
Ralph R. McKee Vocational High School	Staten Island

SCHOOLS/AGENCIES WITH SPECIAL POPULATIONS

Placement and Referral Center	City Wide Special Education
The Livingston High School	Manhattan
Forsyth High	Manhattan
Sterling High School	Brooklyn
Far Rockaway High School	Queens
High School Redirection	Brooklyn

TABLE 10

CETA Youth Employment Training Program*
Work Clusters

Work Cluster	Number of Work Sites	Number of Students	Number of Handicapped Students
Health and Hospitals	48	454	49
Day Care Center	93	173	10
Municipal Government	15	35	4
Board of Education of the City of New York	45	100	0
Housing Renovation (Maintenance)	5	99	1
Law Enforcement	40	127	0
Arts/Culture	6	10	1
Community Agencies	6	35	2
College/CUNY	9	12	9
Botanical Gardens	3	5	7
Senior Citizens	5	0	5
Public Schools	8	0	8
Rehabilitation Center	3	0	3
Zoo	1	0	11
Nursing Homes	4	0	4
Federal Program YETP	1	2	0
Conservation Center	1	2	0

* Table III.4, Youth Employment and Training Program, December, 22, 1978. Comprehensive Annual Program Plan, Occupation Education, 1980, CCOE.

APPENDIX A-1

Interviews Conducted

George Quarles, Chief Administrator - Center of Career and Occupational Education (CCOE), Board of Education

Vera Hannenberg, Project Director, Planning, Evaluation, and Research - CCOE

John Vitale, Assistant Director, Trade and Technical Education - CCOE

Norman Watnick, Assistant Director, Business and Distribution Education - CCOE

Thomas Kane, Coordinator, Business and Community Relations - CCOE

Mary Wiles, Supervisor, Health Careers Coordinating Unit - CCOE

Herbert Siegel, Director, Industrial Arts - CCOE

Constantine Phillippas, Coordinator, Curriculum Unit - CCOE

Howard Friedman, Project Director, Program Management and Operations - CCOE

Anthony Baldino, Project Director, Adult Occupational Unit - CCOE

Susan Wiesenfeld, Coordinator, Agricultural and Horticultural Education - CCOE

Michael Racenelli (and staff), Project Director, Youth Employment Training Program (YETP) - CCOE

Ann Sabato, Project Director, Occupational Edcation Operations - CCOE

Juanita Ward, Project Director, Career Education Unit - CCOE

Olga Sobelsohn, Director, Home Economics Unit - CCOE

Daisy Shaw, Director, Bureau of Educational and Vocational Guidance

Clara Blackman; Jeff Scherr; and Marty Smith - BEVG

Eli Cohen, Executive Secretary - Advisory Council for Occupational Education

Jessica Bram, Director - CETA Administration, Board of Education

Mal Cutler, Deputy Executive Director - Division of High Schools

Rene Sherline, Director - Cooperative Education Program

Perry Davis, Director - Office of Funded Programs

Larry Kohn and Frances Yauch - Office of Program Development, Related Services, Special Education

Pat Jordan, Assistant to Deputy Chancellor Halverson

Paul Frommer, Administrator, Facilities and Planning - Division of High Schools

Timothy Wendt, Special Assistant to the Deputy Chancellor

Muriel Ollivieri, Special Assistant to the Deputy Chancellor

Dr. Nancy Scott, Director - Office of High School Projects

Nathan Quinones, Executive Director - Division of High Schools

Michael Squeglia - United Federation of Teachers, Vocational Education Representative

Dr. Jacob Zach, Director - Career Bridges Program, Aviation Development Council

Rita White, Job Developer - Career Bridges Program

Principals and Assistant Principals

Dr. David Fuchs, Principal - DeWitt Clinton High School

Murray Bramberg, Principal - Andrew Jackson High School

Mr. Siegel, Assistant Principal, Business Education Department - Walton High School

Howard Saronson, Principal - Tottenville High School

Sylvia Ballatt, Principal - Clara Barton High School

Melvin Taylor, Principal - Benjamin Franklin High School

Saul Bruckner, Principal - Edward R. Murrow High School

Irwin Pfeffer, Assistant Principal - Thomas Jefferson High School

Dr. Lawrence Costello, Principal - August Martin High School

Bernard Deutchman, Principal - Norman Thomas High School

Dr. James Canfield, Principal - Ralph McKee Vocational High School

Seymour Kaufman, Principal - Alfred E. Smith Vocational High School

Bernice Kanigher, Principal - Grace Dodge Vocational High School

Appendix A-1

Ms. Gold, Department Chairman - Jane Addams Vocational High School

Victor Herbert, Principal - Samuel Gompers Vocational High School

Dr. Irwin Gross, Principal - Art and Design High School

Bernard Foster, Principal - Chelsea Voctational High School

Frank Medaglia, Principal - William E. Grady Vocational High School

Marion Lucchino, Principal - William H. Maxwell Vocational High School

Arthur Greenberg, Principal - Middle College Alternative High School

Barbara Christen, Principal - Murry Bergtraum High School

Eben Rogers, Principal - Boys and Girls High School

Saul Baily, Principal - Fashion Industries High School

Roslyn Besdine, Principal - Mabel Dean Bacon Vocational High School

George Shirkey, Principal - Manhattan Vocational High School

Pat DeMeo, Principal - New York School of Printing

Robert Grant, Principal - Aviation High School

Dr. Sidney Rosenberg, Principal - Queens Vocational High School

Michael Ignatowitz, Principal - Thomas A. Edison Vocational High School

Kenneth Weissman, Principal - Alexander Hamilton Vocational High School

Louis Auerbach, Principal - East New York Vocational High School

Nathan Mayron, Principal - Eli Whitney Vocational High School

Richard Saferin, Acting Principal - George Westinghouse Vocational High School

Simpson Sasserath, Assi tant to the President, CSA and former president of the Vocational High hools Principals Association

Howard DuSold, Assistant to the Commissioner of Youth Programs - N.Y.C. Department of Employment (DOE)

Edith Robbins, Director, State Vocational Education Services - N.Y.C. DOE

Naida Rasbury, Director, Title IIB Classroom Training I - N.Y.C. DOE

Vermel Doncker, Director, YETP In School Program - N.Y.C. DOE

Nimpha Segurra, Deputy Assistant Commissioner of Youth Services - N.Y.C. DOE

Roberto Albertorio, Assistant Commissioner, Youth Programs - New York City Department of Employment

Herman Fishman, Senior Manager - New York State Employment Services, Joint High School Program

David Morse, Legislative Aide to Senator Javits, Education

Fern Lapidus, Washington Representative - New York City Board of Education

Evelyn Ganzglass - U.S. Department of Labor, Youth Program, Assistant to the Youth Commissioner

Donald Chiavacci, Program Analyst - U.S. Department of Labor, Planning and Design

William J. Boudreau, Supervisor, Division of Occupational Education Supervision - New York State Education Department

Dr. Daniel Koble, Director, Occupational Education - Board of Cooperative Educational Services of Putnam and Northern Westchester County (BOCES)

Mel Mungin - Private Industry Council, Youth Programs

Machine Trades

George Shirkey, Principal; Joe Battiato, Assistant Principal - Manhattan Vocational High School

Dr. Sidney Rosenberg, Principal; George Donohue, Assistant Principal - Queens Vocational High School

Dr. James Canfield, Principal; John DePalma, Assistant Principal - Ralph McKee High School

Michael Ignatowitz, Principal; Ed Hauser, Assistant Principal Technical; Sam Sandonnato, Assistant Principal, Vocational - Thomas Edison Vocational High School

Frank Medaglia, Principal; Mr. Modino, Assistant Principal - Grady Vocational High School

Mr. Munice, Principal; Mr. Kodnovich, Assistant Principal - East New York Vocational High School

Kenneth Weissman, Principal; Arthur Daly, Guidance Counselor; Mr. Goldberg, Coordinator, Metal Trades - Alexander Hamilton Vocational High School

Morris Getler - NEPCO Forged Products

Jim Smith - S & S Corrugated Paper

Will Schoomer - Allomatic Industries

B.R. Sloane - Standard Motors

Ron Dornau - J.B. Slattery and Brothers, Inc.

J. Klein - S & L Metal Company

Jack Carroll - Signal Stat

Emil Kortchmar - retired machine shop owner

Vincent Rojo - Todd Shipyards

Data Processing

Eben Rogers, Principal; Mrs. Alexander, Acting Interim/Assistant Principal of Business; Mr. Riemer, Teacher - Boys and Girls High School

Bernard Deutchman, Principal; Mr. Schwab, Assistant Principal, Accounting and Data Processing - Norman Thomas High School

Dr. Perlman, Principal; Mrs. DePellis, Assistant Principal, Business Education, Home Economic and Industrial Arts; Mr. Cohen, Teacher - Truman High School

Barbara Christen, Principal; Lester Zimmerman, Assistant Principal, Administration; Stan Montz, Assistant Principal, Math and Computer Sciences - Murry Bertraum High School for Business Careers

Dr. Altman, Principal; Mr. Samuels, Assistant Principal of Business; Ms. Pantano, Teacher - Susan Wagner High School

Dr. Lawrence Costello, Principal; Mrs. Lambert, Business Education Coordinator - August Martin High School

Jeffrey Hayowy, Supervisor, Computer Utility Group - Chase Manhattan Bank

John Bono - Dun and Bradstreet

Nancy Feinberg - New York City Department of Taxation and Finance

Ted Tomishewicz - Salomon Brothers

Al Brown - International Business Machines

Professor Somerstein - Queensboro Community College

Professor Davidson - LaGuardia Community College

Appendix A-1

Meetings Attended

Career Bridges Workshop, May 7, 1980.

Superintendents Meeting with Director of High Schools, April 14, 1980.

APPENDIX A-2

Interview Guide for Use with Principals of Vocational High Schools and Principals of Selected Comprehensive High Schools

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Philosophy

How would you define occupational education and what is its purpose?

How do you feel about training students for a specific trade vs. generally preparing students for work?

What do you think of the cluster concept and stressing transferrable skills? Is it possible to have this under the current programs?

How does the end product affect the student's interest in school?

How do stipends affect the student's interest?

How do programs such as Shared Instruction, Coop Ed, and After School Skills compare with in school programs?

What do you think of the career center concept?

Admissions

What should be the most heavily weighted factors for admission to the programs?

Can the admission test be streamlined?

How do you get information about your programs to the feeder schools?

Could students be admitted at later points in the program?

Programs

How do you make programmatic decisions?

How do you select course offerings?

How do you evaluate programs to prove their success or to eliminate them? Do your offerings affect your curriculum index and how heavily is this factor considered?

How often are programs reviewed?

Do you have examples of programs that have continued primarily because of teacher-related skills rather than need?

How can you increase the flexibility of the programs?

What are the mechanisms for occupational exploration in your school?

Do you have separate departments with AP's for occupational ed?

How do reimbursable programs interrelate with tax levy ones?

Personnel and Funding

What types of professional development do you provide for the teachers regarding occupational ed?

How could teacher recruitment be improved?

What percentage of your OTPS money is spent on occupational ed?

What percentage of your units is spent on occupational ed?

Is any of your OTPS money reimbursable funds?

How much do you receive in reimbursables for OTPS? In paras? For supervisors?

How do you use your paras? Are any tax levy paras used for occupational ed programs?

How are budget requests made?

What is the role of guidance counselors in occupational ed?

Relations to Private Industry and the Public Sector

How do you relate to private industry?

What type of advisory commission do you relate to and how do you work with it?

Doi you use privately funded programs such as Open Doors?

How do you get information on labor statistics?

How do you integrate work experience in your programs?

Do you provide any placement services or job development services?

Do you feel this service should be more centralized?

Board Related Organization

How do you relate to CCOE?

How do you relate to other units at the Board?

How do you relate to the borough superintendent in occupational areas?

Are you aware of the borough mini-plans and if so, how will you utilize them?

Do you receive technical assistance or support from any of these units?

APPENDIX A-3

Interview Guide for Use with Principals, Assistant Principals and Teachers in the Fields of Data Processing and Machine Trades

What are the goals of the program (entry level skills vs. further study)?

Why did you select this program for your school?

How do you recruit students for the program?

What is the sequence of courses?

Is the program a 2 year or 3 year sequence?

How do you involve business in curriculum development?

What specific businesses do you involve?

Do they get involved with the purchase of machines?

Do they get involved with curriculum review?

What type of work study programs do you offer and how many students are involved?

How and where do you place graduating students? Work study students?

How do your teachers remain current in the field?

Do you have any contact with the Dept. of Employment in this program? Is any part of the program funded from other than tax levy sources?

How do the units at the Board, such as the Center for Career and Occupational Education and the Division of High Schools, get involved in the program?

Do you have any plans to expand the program?

Interview Guide with the Private Sector

Have you had contact with the school system?

How was it initiated?

Who was the initial contact person, and at what school?

How often are you in contact with them?

What has been the result of this contact?

Is your contact in terms of placement or curriculum development?
Which do you think should be the role?

Do you hire high school graduates?

How well are they trained? What skill areas are the strongest? The weakest?

Do you have any work study students?

Is it successful?

What can you do for the schools?

What can they do for you?

APPENDIX B

Student Questionnaires

Student Questionnaire (DATA PROCESSING) Total Number of Students: 163.

1. Why are you taking this course? (Can check more than one)

		% Students Surveyed	% of Responses
I want to get a job in this field	113	(69.3%)	46.3%
My parents suggested it	23	(14.1%)	9.4%
My teacher suggested it	11	(6.7%)	4.5%
My guidance counselor suggested it	33	(20.2%)	13.5%
I didn't want to take another academic subject	19	(11.7%)	7.8%
My present employer suggested it	3	(1.8%)	1.2%
A friend told me it was an interesting course	42	(25.8%)	17.2%

2. Do you know what the opportunities for jobs in data processing are?

Yes	110	(67.5%)
No	13	(8.0%)
Unsure	38	(23.3%)
No Response	2	

3. Are you familiar with advancement possibilities in this trade?

Yes	103	(63.2%)
No	28	(17.2%)
Unsure	32	(19.6%)

4. Do you know what skills you must have to get a job in data processing?

Yes	94	(57.7%)
No	33	(20.2%)
Unsure	36	(22.1%)

5. Did a guidance counselor help you select this program?

   Yes 33 (20.2%)

   No 127 (77.9%)

   Unsure 3 (1.8%)

6. Do you think the course is teaching you skills you can sell?

   Yes 110 (67.5%)

   No 19 (11.7%)

   Unsure 30 (18.4%)

   No Response 4

7. Do you plan to get a job in this field after high school graduation or go on to further education?

   Job 27 (16.6%)

   Apprenticeship program 3 (1.8%)

   2-year college 31 (19.0%)

   4-year college 103 (63.2%)

   (One student: apprenticeship and 2-year college)

8. Have you ever visited a business to see what you would do if you stay in data processing?

   Yes 50 (30.7%)

   No 112 (68.7%)

   No Response 1

9. Are you in any work study program?

   Yes 17 (10.4%)

   No 125 (76.7%)

   COOP Ed 8 (4.9%)

   YETP 6 (3.7%)

   Other 6 (3.7%)

   No Response 1

10. What year student are you?

Student Questionnaire (MACHINE TRADES) Total Number of Students: 143.

1. Why are you taking this cource? (Can check more than one)

		% Students Surveyed	% of Responses
I want to get a job in this field	85	(59.4%)	31.8%
My parents suggested it	16	(11.2%)	6.0%
My teacher suggested it	12	(8.4%)	4.5%
My guidance counselor suggested it	12	(8.4%)	4.5%
I didn't want to take another academic subject	21	(14.7%)	7.9%
My present employer suggested it	4	(2.8%)	1.5%
A friend told me it was an interesting course	45	(31.5%)	16.9%
It has a good future	60	(42.0%)	22.5%
It was the only space available at this school	12	(8.4%)	4.5%

2. Do you know what the opportunities for jobs in the machine trades are?

Yes	98	(68.5%)
No	4	(2.8%)
Unsure	35	(24.5%)
No Response	6	

3. Are you familiar with advancement possibilities in this trade?

Yes	61	(42.7%)
No	18	(12.6%)
Unsure	16	(11.2%)
No Response	48	

4. Do you know what skills you must have to get a job in the machine trades?

Yes	107	(74.8%)
No	11	(7.7%)
Unsure	18	(12.6%)
No Response	7	

5. Did a guidance counselor help you select this program?

   Yes 29 (20.3%)

   No 106 (74.1%)

   Unsure 1 (.7%)

   No Response 7

6. Do you think the course is teaching you skills you can sell?

   Yes 93 (65.0%)

   No 18 (12.6%)

   Unsure 21 (14.7%)

   No Response 11

7. Do you plan to get a job in this field after high school graduation or go on to further education?

   Job 58 (40.6%) (5 students indicated a combination of job and school)

   Apprenticeship program 7 (4.9%) (3 students indicated a combination of an apprenticeship program and school)

   Technical School 21 (14.7%)

   4-year college 65 (45.5%)

8. Have you ever visited a business to see what you would do if you stay in the machine trades?

   Yes 56 (39.2%)

   No 73 (51.0%)

   No Response 14

9. Are you in any work study program?

   Yes 7 (4.9%)

   No 126 (88.1%)

   COOP Ed 1 (.7%)

   YETP 0 (0%)

   Other 2 (1.4%)

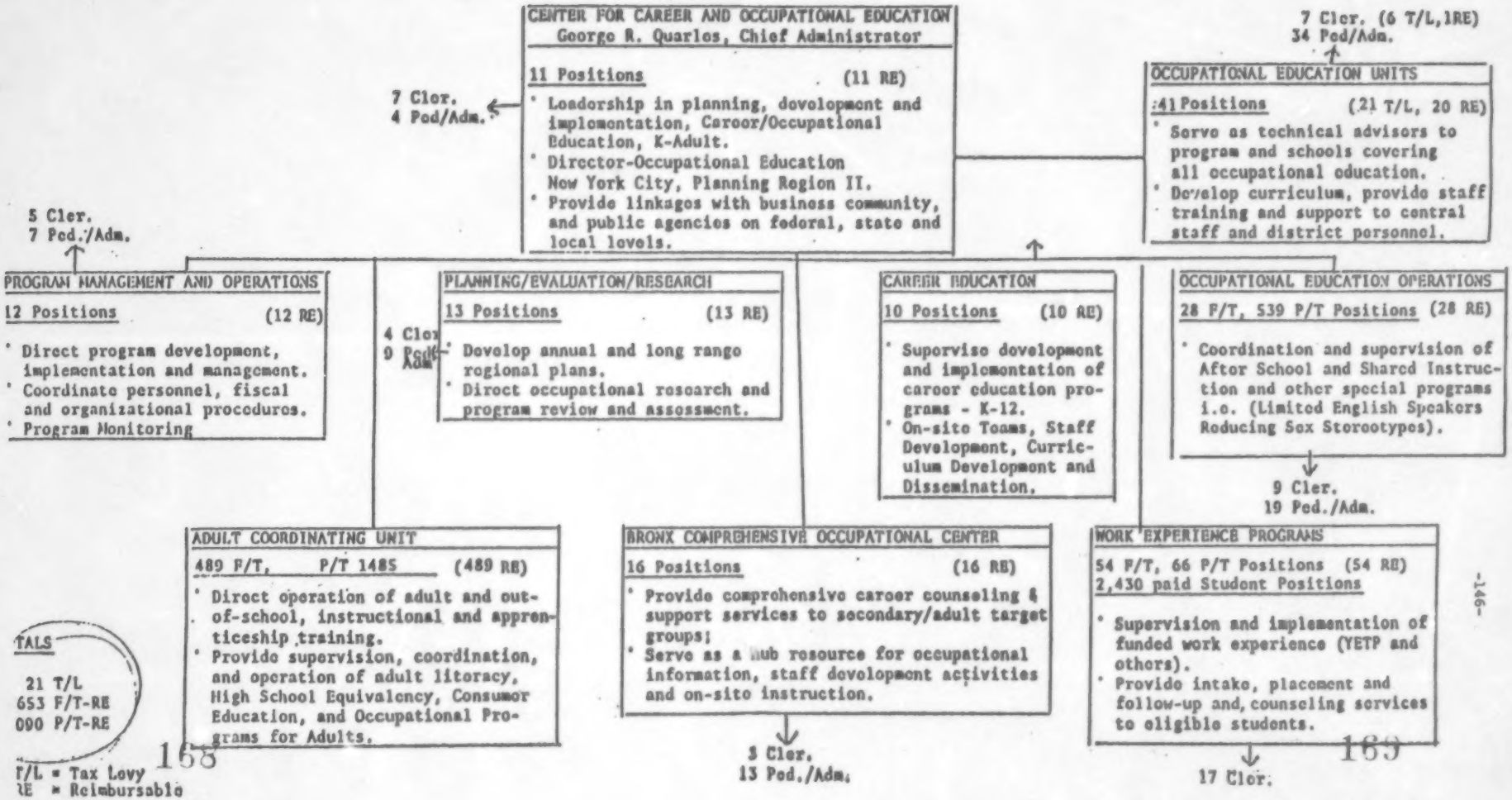
   No Response 7

10. What grade are you in?

BOARD OF EDUCATION OF THE CITY OF NEW YORK

APPENDIX C

I. ORGANIZATION 1978-79


CENTER FOR CAREER AND OCCUPATIONAL EDUCATION
George R. Quarles, Chief Administrator
11 Positions (11 RE)
• Leadership in planning, development and implementation, Career/Occupational Education, K-Adult.
• Director-Occupational Education New York City, Planning Region II.
• Provide linkages with business community, and public agencies on federal, state and local levels.
7 Cler.
4 Ped/Adm.
7 Cler. (6 T/L, 1RE)
34 Ped/Adm.
OCCUPATIONAL EDUCATION UNITS
41 Positions (21 T/L, 20 RE)
• Serve as technical advisors to program and schools covering all occupational education.
• Develop curriculum, provide staff training and support to central staff and district personnel.
5 Cler.
7 Ped./Adm.
PROGRAM MANAGEMENT AND OPERATIONS
12 Positions (12 RE)
• Direct program development, implementation and management.
• Coordinate personnel, fiscal and organizational procedures.
• Program Monitoring
4 Cler
9 Ped/Adm
PLANNING/EVALUATION/RESEARCH
13 Positions (13 RE)
• Develop annual and long range regional plans.
• Direct occupational research and program review and assessment.
CAREER EDUCATION
10 Positions (10 RE)
• Supervise development and implementation of career education programs - K-12.
• On-site Teams, Staff Development, Curriculum Development and Dissemination.
OCCUPATIONAL EDUCATION OPERATIONS
28 F/T, 539 P/T Positions (28 RE)
• Coordination and supervision of After School and Shared Instruction and other special programs i.e. (Limited English Speakers Reducing Sex Stereotypes).
9 Cler.
19 Ped./Adm.
ADULT COORDINATING UNIT
489 F/T, P/T 1485 (489 RE)
• Direct operation of adult and out-of-school, instructional and apprenticeship training.
• Provide supervision, coordination, and operation of adult literacy, High School Equivalency, Consumer Education, and Occupational Programs for Adults.
BRONX COMPREHENSIVE OCCUPATIONAL CENTER
16 Positions (16 RE)
• Provide comprehensive career counseling & support services to secondary/adult target groups;
• Serve as a hub resource for occupational information, staff development activities and on-site instruction.
3 Cler.
13 Ped./Adm.
WORK EXPERIENCE PROGRAMS
54 F/T, 66 P/T Positions (54 RE)
2,430 paid Student Positions
• Supervision and implementation of funded work experience (YETP and others).
• Provide intake, placement and follow-up and, counseling services to eligible students.
17 Cler.

TALS

21 T/L
653 F/T-RE
090 P/T-RE

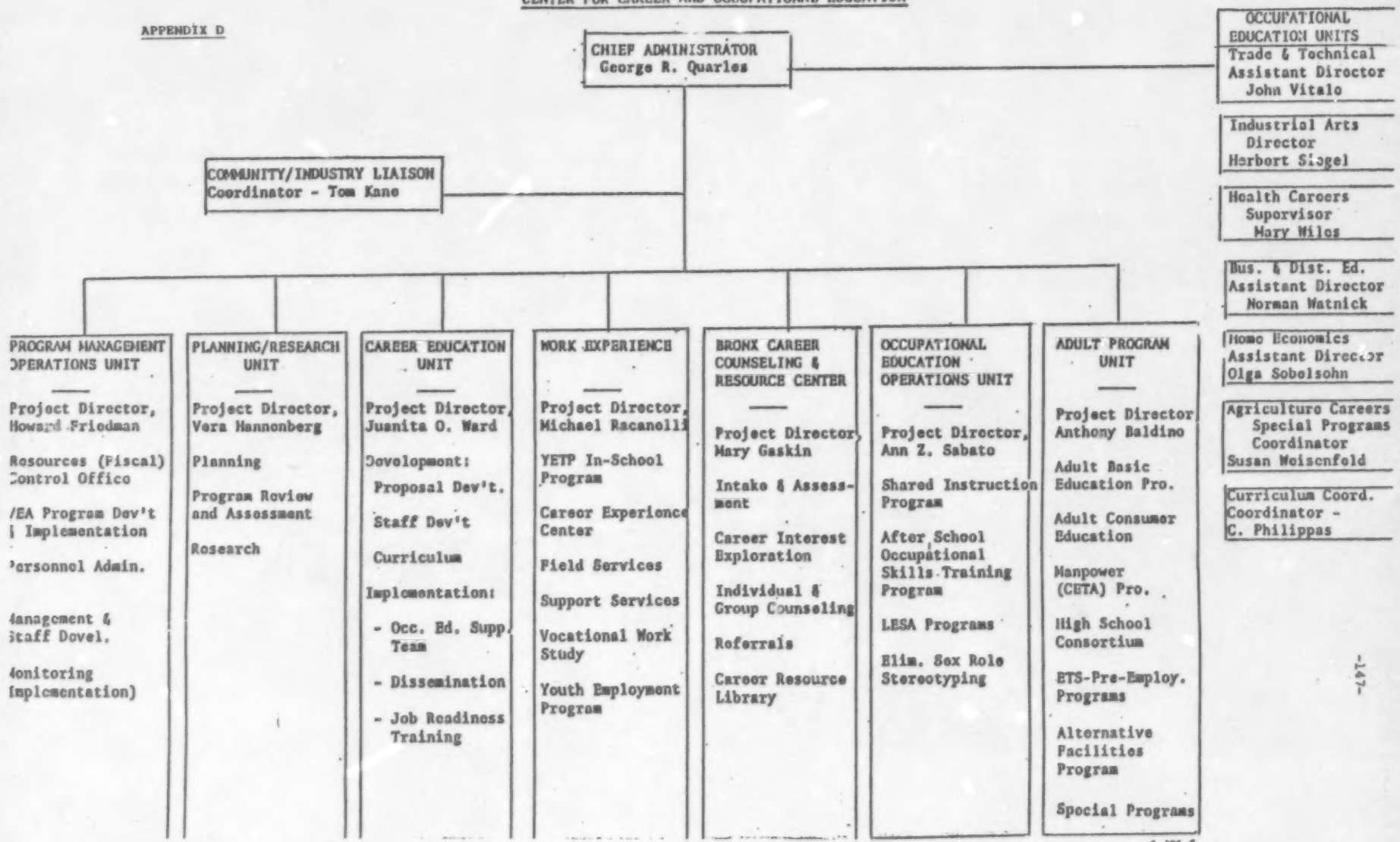
T/L = Tax Levy
RE = Reimbursable

168

169

APPENDIX D

CENTER FOR CAREER AND OCCUPATIONAL EDUCATION



APPENDIX E

Board of Education of the City of New York
CENTER FOR CAREER AND OCCUPATIONAL EDUCATION
110 Livingston Street, Brooklyn, N.Y. 11201
522-5122

GEORGE R. QUARLES
Chief Administrator

September 26, 1979

CENTER MEMORANDUM

TO: Community School Board Chairmen, Community Superintendents, High School Superintendents, Principals of Day High Schools, Heads of Bureaus, Directors of Occupational Units and Coordinators of VEA Programs

FROM: George R. Quarles, Chief Administrator George R. Quarles

SUBJECT: Vocational Education Act Proposals - 1980-81

The Center for Career and Occupational Education is requesting input for proposals for funding under the Vocational Education Act of 1976. These proposals will be developed for implementation during the 1980-81 school year.

The Vocational Education Act provides funds for vocational programs that will enable participants to prepare for entry-level positions. As such, requests for funding should be directed towards the development of new or enhanced educational opportunities in fields where labor shortages exist (this must be documentable). In addition, limited funding is available for programs that provide for the upgrading of existing skills (for lateral and upward mobility) and/or prepare participants for pre-technical or other post-secondary occupational education.

Schools submitting requests for funding must obtain approvals from the Principal and the Superintendent prior to submission to CCOE. All requests for funding must be presented to the Chief Administrator, Center for Career and Occupational Education, the Chancellor, the Advisory Council for Occupational Education, the City-Wide Advisory Committee for Funded Programs, and the Central Board of Education. Following local refinement and approval, the proposal is incorporated into the Annual Plan for Occupational Education in New York City and sent to the State Education Department for review, approval and allocation of funds. All VEA proposals must follow this procedure and be approved by all of the above offices before they can be initiated.

Anyone requesting VEA funds should submit a proposal outline (following the guidelines listed below) to the appropriate occupational specialist (see page 2) within the Center for Career and Occupational Education, for initial review and possible discussion. This conceptual outline is to be submitted no later than the close of business, November 21, 1979.

Requests for funds should include the following information:

1. Supportive data for needs, including finding or studies which justify the program and/or documentation from industry or an advisory council.

2. Equipment currently available to support the program and facilities available for program use.

3. Program objectives, in mensurable terms, as well as items that will be used to help evaluate the program.

4. A complete description of the program, including the number of students involved, the number and qualifications of all faculty (both current and to-be-hired), all budgetary items and an outline of the instructional content.

5. How the program will relate to local short range and long range planning and the State Plan for Occupational Education. In addition, indicate the extend to which the program will help meet the manpower needs of the immediate area as well as satisfying local student interest.

6. Where appropriate, include an outline of the instructional content of the program.

Appendix E

Adult Coordinating Unit P.S. 6, 347 Baltic Street Brooklyn, NY 11201	Anthony Baldino (596-4402)
Agriculture and Ornamental Horticulture Programs 131 Livingston Street, Brooklyn, NY 11201	Susan Weisenfeld (596-4082)
Bureau of Cooperative Education 110 Livingston Street Brooklyn, NY 11201	Renee Sherline (596-6978)
Bureau of Guidance 362 Schermerhorn Street Brooklyn, NY 11217	Martin Smith (596-5154)
Business and Distributive Education 131 Livingston Street Brooklyn, NY 11201	Norman Watnick (596-4966)
Health Careers Coordinating Unit 131 Livingston Street Brooklyn, NY 11201	Mary Wiles (596-6953)
Home Economics Office 131 Livingston Street Brooklyn, NY 11201	Olga Sobelsohn (596-4930)
Industrial Arts Office 131 Livingston Street Brooklyn, NY 11201	Herbert Siegel (596-5056)
Occupational Curriculum Coordination P.S. 6, 347 Baltic Street Brooklyn, NY 11201	Constantine Philippas (596-4406)
Trade and Technical Education Office 131 Livingston Street Brooklyn, NY 11201	John Vitale (596-6136)
Office of Program Management and Operations 110 Livingston Street Brooklyn, NY 11201	Howard Friedman (596-4061)

Late submissions may not be considered for the 1980-81 school year. All outlines will be forwarded to the Office of Program Management and Operations by the abovementioned occupational specialist (based on the suitability of the program design and availability of adequate facilities to house the program).

Once a proposal outline is considered acceptable, based on priorities established by the New York City and New York State Plans for Occupational Education it may be requested that the outline be re-submitted in proposal form.

Your cooperation is appreciated.

GRQ:sc

APPROVED

Ronald Edmonds
Senior Assistant to the Chancellor
for Instruction

APPENDIX F

Education Options Schools and Courses

High School	Subject	Area
Abraham Lincoln (K)	Pre-Veterinary Studies and Animal Care	Brooklyn
Andrew Jackson (Q)	Pioneer Law Program	Queens
August Martin (Q)	Institute for Science and Technology Aviation Careers Data Processing Communications Center for Radio and Television	Citywide
Beach Channel (Q)	Institute of Oceanography	Citywide
Boys and Girls (K)	Urban Planning Construction Management Computer Science	Brooklyn
Clara Barton (K)	Health Professions	Citywide
Edward R. Murrow (K)	Communications Arts Experimental School Independent Study	Brooklyn
Far Rockaway (Q)	Humanities and Arts Health Careers Gerontology	Queens
James Madison (L)	Center for Administration and Management	Brooklyn
John Dewey (K)	Experimental Independent Study	Brooklyn
John Jay (K)	Criminal Justice Careers	Brooklyn
Julia Richman (M)	Practical Nursing Naval Junior R.O.T.C. Humanities Mini-school	Citywide
Murry Bergtraum (M)	Computer Science Marketing (Insurance, Banking and Finance, Real Estate, International Trade) Accounting Secretarial Science Legal Studies	Citywide

High School	Subject	Area
Norman Thomas	Accounting and Data Processing	Citywide
	Marketing Careers	
	Secretarial Careers	
Park West (M)	Pre-Technical Electronics and Small Appliance Repair	Citywide
	Automotive	
	Aviation	
Samuel Tilden (K)	School for Law, Politics and Community Affairs	Brooklyn only
Sarah Hale (K)	Cosmetology	Brooklyn only
Thomas Jefferson (K)	Institute of Recreational Careers	Brooklyn only
Tottenville (R)	Dental Careers	Richmond only
Walton (X)	Business Academy	Bronx only
	Performing Arts Academy	Bronx only
Washington Irving (M)	Medical Assistant	Citywide

APPENDIX G

Programs Selected for Curriculum Development

ISSOE

Automotive Mechanics

Building Industries

Carpentry

Electrical Trades

Electronics

Foods

General Merchandise Retailing

Graphics

Health Assisting

Office Clerical

VOC-TECHS

Auto Body Repair

Clothing Alterationist

Computer Operator

Cosmetologist

Dental Assistant

Industrial Sewing Machine Operator

Licensed Practical Nurse

Secretary

CITY ISSOE

Aircraft Ground Support

Avionics

Business Machine Repair

APPENDIX H

Summary of Recommendations to be Implemented At a Borough Level

EPP feels that changes in the delivery of the vocational education system should focus on borough changes, primarily because the planning in the boroughs are more manageable than the city-wide system. Any recommendations for the boroughs should be related to the expressed needs and demands of each borough rather than a totally equal division of resources into five parts. The borough mini-plans can be of use in this focus, although they do not address expressed demand of the students.

The Department of Employment and Board of Education should consult with each other, through involving the superintendent, as to programs targeted in specific boroughs toward youth. In this regard, programs could be coordinated and space leased jointly where appropriate.

Equipment purchase should be based on priorities for existing programs, supplementing and updating offerings that are in place and need to be expanded or upgraded.

The relationships of vocational and comprehensive schools with community colleges should be expanded particularly in the occupational areas. Coordination of high schools with appropriate community colleges should be the responsibility of the borough superintendents. Demonstration projects should be developed in each borough in 2-3 vocational areas.

Assessments should be made of the types of businesses surrounding each school with the goal being to establish interest on the part of the business community in the school, its program, and its students. Often the students are the best link to stimulate the private sector

involvement. The Private Industry Council and Chamber of Commerce should assist the Board in this assessment. The borough mini-plans developed by CCOE should be distributed to all the high school principals and used in their meetings with the superintendents. In addition, the charts in the mini-plans demonstrating course offerings should be incorporated into guidance programs at the feeder schools to provide more exact information for the guidance personnel, students and parents in determining the actual offerings in the schools.

Stronger coordination between the Advisory Council and the superintendents should be established through representation by staff of the superintendents on the Advisory Council. The current expenditure of tax levy funds for vocational and occupational education by borough should be used in determining future geographical priorities for funding programs.

GLOSSARY OF TERMS

VEA: Vocational Education Act -- a federal program administered by the Office of Education for vocational programs. Federal dollars are allocated to the State Education Department which gives it to the various regions. New York City is Region 2.

Chapter 399: A part of the general State Aid to Education monies, based on occupational courses and given to the "Big 5" cities in New York State who do not receive BOCES money.

CETA - Comprehensive Employment and Training Act: U.S. Department of Labor funds. YETP, the Youth Employment and Training Act, is Title IV of CETA, designed to make available to youth a broad range of employment and training services designed locally and adopted to local needs. It is administered by the New York Department of Employment (DOE).

DOE: New York City Department of Employment.

CCOE: Center for Career and Occupational Education.

BEVG: Bureau of Educational and Vocational Guidance.

OFP: Office of Funded Programs.

BOCES: Boards of Cooperative Education Services

PIC: Private Industry Council and part of the Chamber of Commerce.

PSE: Public Service Employment, an adult subsidized employment program.

COOP: Cooperative Education Program, a work experience program.

OTPS: Other than Personal Services.

ED OPS: Educational Option Courses, a three year sequence of courses which prepares students for jobs in a career area, as well as for college.

AP: Assistant principal.

BACIS: Business and Accounting Computer Information System at the Board of Education.

ISSOE: Instructional Support System for Occupational Education of the State Education Department.

SIP: Shared Instruction Program -- Students travel from their regular schools to other high schools to take occupational training courses for two period every day, for credit.

ASOSP: After School Occupational Skills Program. Students take occupational skills courses after school at other high schools, 4 hours a week, for 30 weeks.

BIBLIOGRAPHY

Board of Education Documents:

Center for Career and Occupational Education:

Narrative Description of the In-School Youth Employment and Training Program to be Carried Out Under Agreement Between the City of New York (Department of Employment) and the New York City Board of Education Under the Comprehensive Employment and Training Act (CETA) Youth Employment and Training Program (YETP) October 1, 1979 - September 30, 1980.

Center for Career and Occupational Training: "Summer Youth Program Annual Report," July-August, 1979.

"Project CAR - Careers in Automotive Research:" A Follow-up Study of Completers of Automotive Occupational Training Programs, February 1977 - June, 1977. Spring, 1980.

"Project CATCH - Career Training Choice:" Follow-up Studies of Students Denied Admissions to the Vocational High School, February, 1976 - June, 1977, Winter, 1980.

Vocational Education Act: "Summaries of Funded Programs," 1978-79.

"A Comprehensive Occupational Education System: Research and Experimentation in a Career Development Center (COES)." August 30, 1977.

"Comprehensive Annual Program Plan: Occupational Education, 1980." December, 1978.

A Comprehensive Occupational Education System, Volume 1: Planning a Comprehensive Occupational Education System for a Major Metropolitan Area. August 30, 1977.

"A Survey of the Occupational Education Delivery System in the Borough of Queens." May, 1979.

"A Survey of the Occupational Education Delivery System in the Borough of Manhattan." May, 1979.

"A Survey of the Occupational Education Delivery System in the Borough of Brooklyn." May, 1979.

"A Survey of the Occupational Education Delivery System in the Borough of Richmond." May, 1979.

"A Survey of the Occupational Education Delivery System in the Borough of the Bronx." May, 1979.

"Linkages for New York City, a Youth Demonstration Project. Submitted by NYC Department of Employment, Center for Career and Occupational Education, New York State Employment and Training Council, and New York State Education Department. October, 1979.

New York City Board of Education. Bureau of Education and Vocational Guidance - Final Report: Career Guidance Institute. February - May, 1978.

Office of Cooperative Education - "Comparison of Attendance: Regular Course Students vs. Cooperative Education Program Students. Fall, 1979 term.

Cooperative Education Bureau - "Six Month Follow-Up Study of June 1978 Graduates of the Cooperative Education Program."

Vocational High School Principals Association - Vocational Education in the 70's, February, 1971.

Office of the Chancellor - Report of the Chancellor's Task Force on Occupational Education, 1976.

Memorandum: To Frank J. Macchiarola from Nathan Quinones, Director - Division of High Schools, March 17, 1980. "Development of Career Education Programs in Selected New York High Schools."

Office of the Chancellor - Internal Report on the Structure of Vocational Education at the Board of Education, 1979. Report done by Muriel Ollivieri.

Other Documents:

Education in the Comprehensive High School: Report and Recommendations. May 31, 1967.

Association of Business, Labor and Education - Vocational School - Industry Relationships: An Informal Review, 1978.

Aviation Development Council, Career Bridges Program - Handbooks for Employers, Students and Parents.

Carnegie Council on Policy Studies in Higher Education - Giving Youth a Better Chance, Jossey-Bass Publishers, 1979.

Center for Vocational Education, Ohio State University - National Large Cities Vocational Education Needs Study, 1977. Kay Angona Adams.

Community Council of Greater New York - Citizen Monitoring Report: Youth Programs in New York City. "Youth Community Conservation and Improvement Projects and Youth Employment and Training Programs. January 1978 - April, 1979."

Economic Development Council of New York City, Inc. - "Managing New York City's Demanding Years Ahead". Yearbook 1978-1979.

Economic Development Council - "Review of Business Education in New York City's High Schools for the Business Education Advisory Commission." June 14, 1976.

Educational Priorities Panel - "Allocation of Tax Levy Funds to New York City High Schools." May 1, 1979.

INTERFACE - "Case Study of Two Industries: Machine Trades and Banking." June 11, 1979. The Rockefeller Brothers Fund Conference on Employment, Training and Economic Development, prepared by Walter Armstrong.

INTERFACE - "A Profile of the Economic Development and Employment Training Needs of Manufacturing Firms in Long Island City." May, 1980, prepared by Walter Armstrong.

Katz, Blanche K. - "Change in the High Schools": Report prepared for Dr. Mary E. Meade, Member, Board of Ecuaction. February, 1971.

Labor Market Information Network - "Employers' View on Hiring and Training", 1978 and 1970 (two volumes).

Nassau Commission on Vocational and Special Education, Minority Report - "Preparing Youth for the World of Work." April, 1965.

New York City CETA Youth Council - "Youth Community Conservation and Improvement Project (YCCIP) Symposium Report". July 16, 1979.

Summary Report for the New York City Department of Employment on Youth Employment Statistics, prepared by Henrietta DeVere, 1979.

New York City Office of The Comptroller - "Performance Audit of Vocational Education in New York City, 1978."

Policy Studies in Education - Evaluation Report: "Youth Employment and Training Program", Center for Career and Occupational Education, New York City Board of Education. January, 1980.

Public Education Association Committee on Education, Guidance and Work - "The Secondary School Program in New York City". November, 1964.

Public Education Assocation Committee on Education, Guidance, and Work - "Reorganizing Secondary Education in New York City." October, 1963.

Women's City Clubs of New York, Inc. - "Bricks without Straw: A Look at the Multi-Trade Vocational High Schools in New York City"." January, 1963.

Bibliography

Articles:

Barbanel, Josh, "Vocational Schools are on the Upswing", New York Times, January 6, 1980.

Business and Office Insider - "What Does Business Expect of Our Graduates". January, 1980, Vol. 55, No. 1 (Journal of the American Vocational Association).

Daniels, Lee A., "Part-Time Jobs for Teenagers are in Demand", New York Times, May 6, 1979.

Greene, Mel, "They Link Hands to Rescue Truants", Daily News, April 20, 1980.

Journal of the American Vocational Association, Voc Ed, May 1979. "The City: A Vocational Education Frontier", p. 28-50. Includes article by George R. Quarles: "The Challenge to Make Voc Ed Central to Our Cities".

Maeroff, Gene I., "State Plan in Business Courses Debated", New York Times, January 22, 1980.

Shabecoff, Philip, "Jobs for Youth: New Proposals for an Old Problem", New York Times, March 9, 1980.